USDA

United States Department of Agriculture

Resource Stewardship Evaluation Tool (RSET)

Pasture Evaluations

Natural Resources Conservation Service

nrcs.usda.gov/

Contents

Updated October 2018

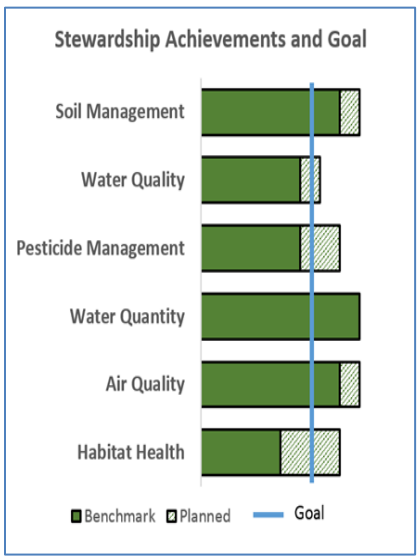
Resource Stewardship Overview

Resource Stewardship (RS) is a voluntary service provided by NRCS through a new evaluation tool. RS enhances conservation planning by benchmarking the level of resource stewardship on the land and helping NRCS clients better identify their conservation goals and improve their outcomes.

RS (also known as the Resource Stewardship Evaluation Tool or RSET) uses a web-based platform to evaluate the health of soil, water, air, and wildlife habitat. RS evaluates a user defined management system against the inherent site characteristics to perform this evaluation.

Upon the completion of RS, clients receive a report called the Resource Stewardship Evaluation (RSE) which visually graphs their stewardship achievements and suggests opportunities to improve resource stewardship. Evaluations are available for crop, pasture, range, forest, farmstead, and associated ag land uses.

If you would like a Resource Stewardship Evaluation completed on your operation, please reach out to your local NRCS office.



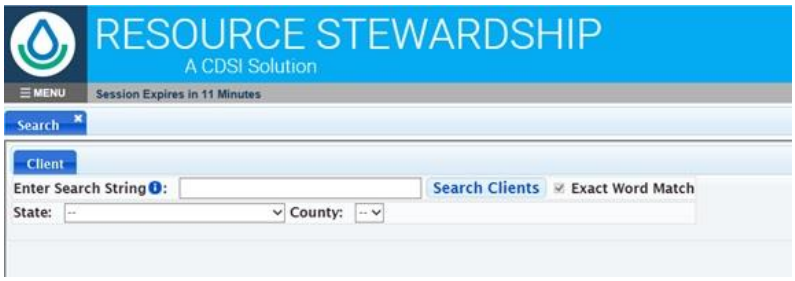
Left: Example visual from an RSE report, highlighting where a client's operation scores on each of the criteria listed in comparison to the vertical blue threshold bar. The shaded bars suggest opportunities the client can take to meet or surpass the threshold bar and improve resource stewardship.

Please note that to maintain and protect confidential client information, only NRCS staff and specific partners can currently access RS. To access Resource Stewardship, visit https://rs.sc.egov.usda.gov/Splash.aspx/.

The following instructional walk-throughs are developed for those with access to RS to use as a resource while completing evaluations, as well as for those interested in learning more about RS.

Client Search Overview

Selecting a client and Planned Land Unit (PLU) is the first step in Resource Stewardship (RS). Please note that only NRCS staff and select partners have access to detailed client information within RS.



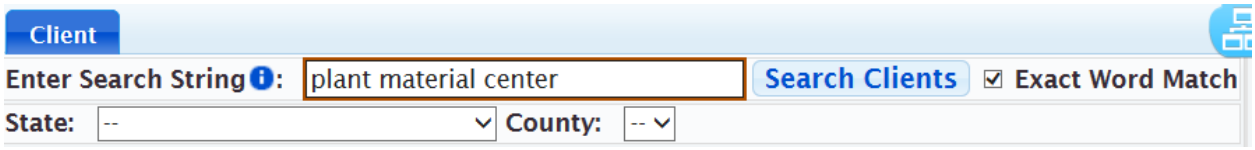
After logging into Resource Stewardship (https://rs.sc.egov.usda.gov/Splash.aspx), a search bar will be displayed to search for clients and identify a Planned Land Unit (PLU) to evaluate. Access to clients is determined by individual user's role(s) in the Customer Service Toolkit (CST), managed through the zroles system.

It is important to note that a PLU must be identified and created in CST prior to running an evaluation. A PLU is a unique geographic area, defined by a polygon, which has common land use and is owned, operated, or managed by the same cooperator(s). The PLU is the minimum unit for planning and evaluation. RS pulls PLUs from CST. PLUs must be in Plan (green) or in Locked (red) status and will be imported from an existing conservation map plan by searching for the land user's name. PLUs may or may not correspond to the Farm Service Agency (FSA) tracts and fields identified in the Common Land Unit (CLU) layer maintained by FSA depending on how the PLUs were setup in toolkit by the conservation planner. Any number of planned land units may be evaluated individually or together in an operation evaluation. When performing the evaluation, adjacent land which is outside of the PLU but integral to the PLU management system will also be considered when evaluating the PLU. For instance, management of field bordering vegetation and adjacent conservation practices, such as windbreaks, may also provide wildlife benefits, as well as have an effect on soil, water, and air quality.

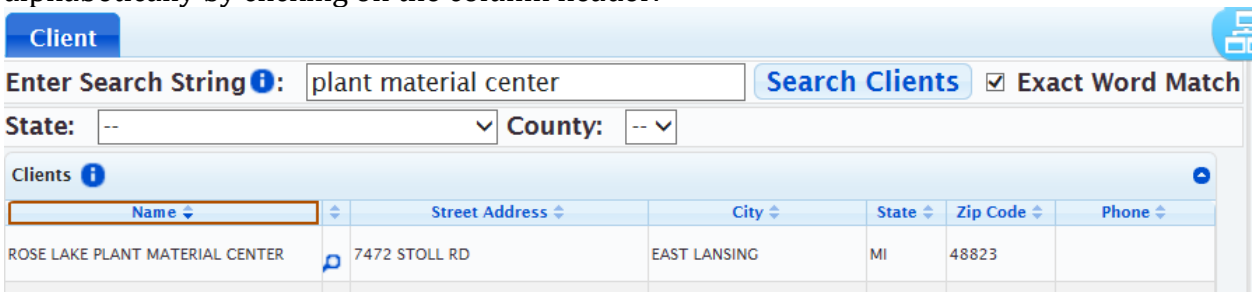
Client Search Walk-Through

STEP 1: Identify the Client

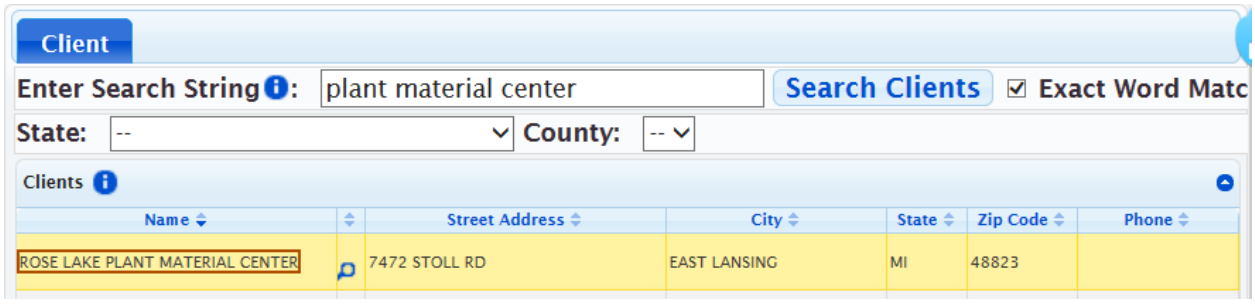
1. Search the National Planning and Agreements Database (NPAD) for a client by entering the client name in the search string and clicking the **Search Clients** button. The returned client results can be narrowed down to clients in state and county or the initial client search can specifically search for clients by state and county. Uncheck the **Exact Word Match** box for clients with an ampersand (&) in their name.



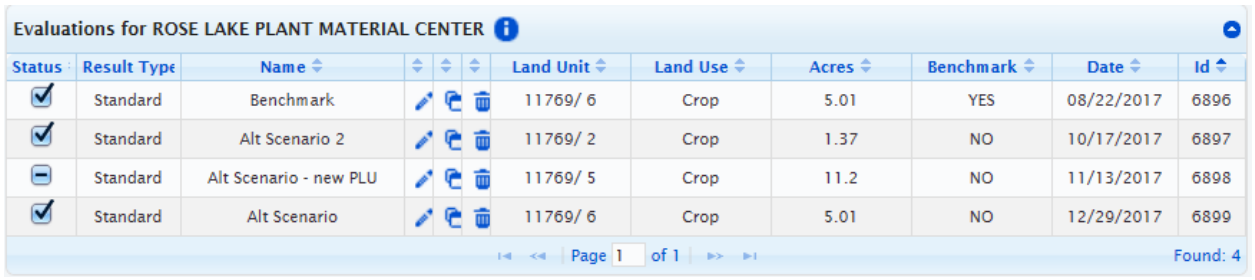
If numerous clients are returned, the client list can be sorted numerically or alphabetically by clicking on the column header.



2. Select the client by clicking on the client's name.

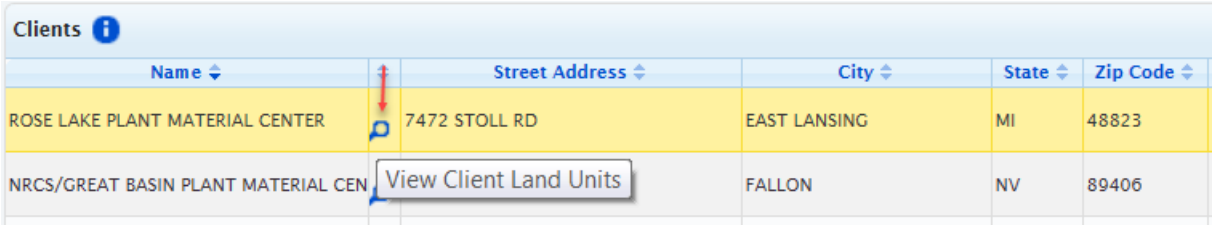


Existing PLUs (if any) and operation evaluations will be displayed.



Step 2: Identify the Planned Land Unit

1. Click on the **View Client Land Units** button to view the client's land units.



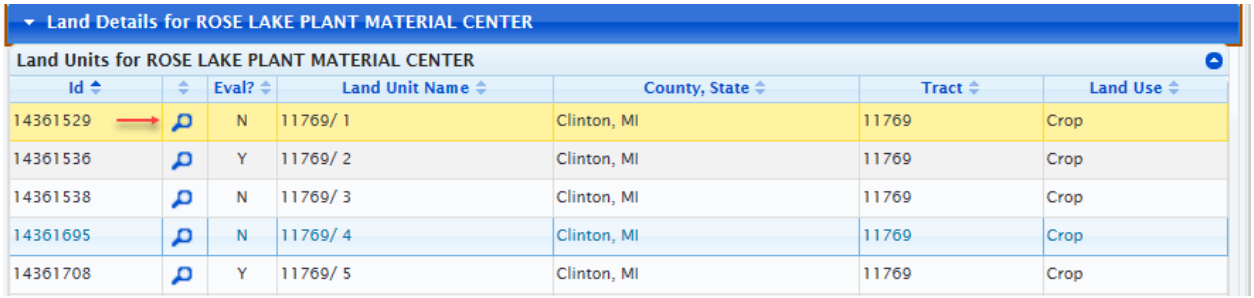
The land units can be sorted numerically or alphabetically by clicking the up or down arrow located on the column header.

2. If several land units are associated with this client, determine which one to select. Click on a land unit in the display area to view the attributes. To dismiss the popup, click the x located in the upper right corner or click in the map area off of the land unit.

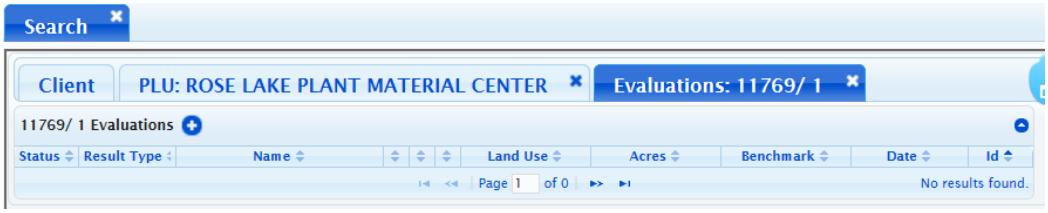
Navigating the Display Area

Zoom In	Click the Zoom In + button or roll the mouse scroll wheel away from you.
Zoom Out	Click the Zoom Out − button or roll the mouse scroll wheel towards from
Pan	Hold down the left mouse button or scroll wheel and move the mouse.

3. Click the **View or Add Evaluations** button associated with the selected land unit.



An Evaluations tab is added.



Creating a New Evaluation Overview

RS allows users to create two different types of evaluations: a benchmark and an alternate scenario. A benchmark designation is meant to act as a starting point for conservation planning. RS envisions the opportunities for evaluating multiple alternative scenarios as part of the planning process, as well as documenting implementation and effects as conservation practices and activities are applied.

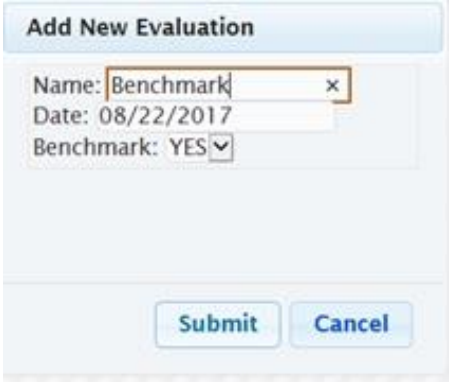
Alternate scenarios may be related to specific conservation plans, programs, or evaluation dates documenting continuous improvement. The user should select a name for the evaluation which appropriately indicates its relationship.

Creating a New Evaluation Walk-Through

Once a client and planned land unit (PLU) have been selected, the Evaluations tab will be added on the Client bar in the Search tab.

1. Click the **Add New Evaluation** button.

2. The Add New Evaluation dialog opens. In the Add New Evaluation dialog, enter the **evaluation name**, **date,** and answer **Yes** if this is the benchmark evaluation. The benchmark represents the current condition. There can only be one benchmark per PLU but there can be many alternate scenario evaluations. The date for the evaluation defaults to the date it was create in RS. The user may modify this date to reflect when the field evaluation was conducted.



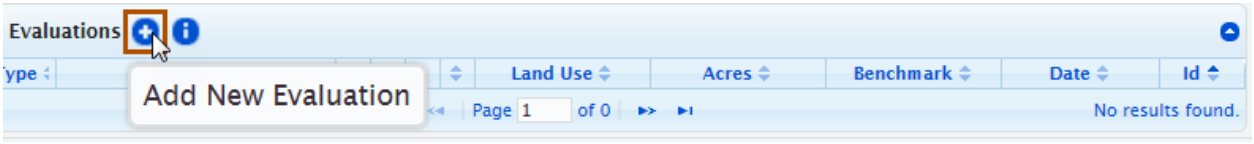
3. Click the **Submit** button when done.

The evaluation is added to the evaluation list.

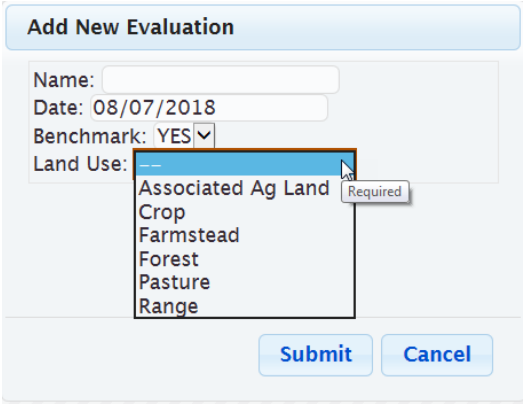
Creating a New Evaluation for Mutable Land Uses

For land uses categorized in NPAD as protected, undetermined, or other rural land, RS will offer the user the option to select a directly supported land use. In the example below, an evaluation on a protected land use PLU is selected for a client.

1. After selecting the client and a PLU on a mutable land use (protected, undetermined, or other rural land), from the Evaluations tab, select the **Add New Evaluation** button.

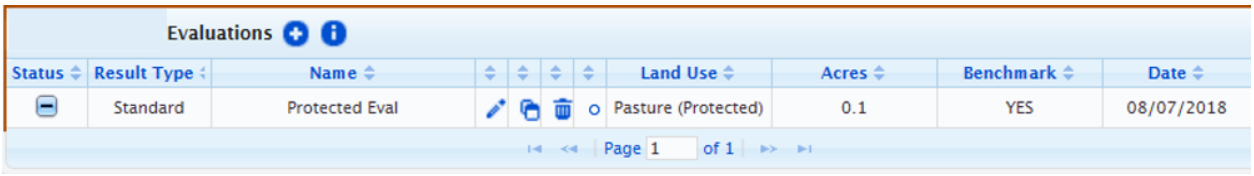


2. The Add New Evaluation dialogue opens. Enter the **evaluation name**, **date,** and answer **Yes** if this is the benchmark evaluation. Because this is an evaluation on a mutable land use (protected, undetermined, or other rural land), select the directly supported **land use** type (associated ag land, crop, farmstead, forest, pasture, or range).



3. Click **Submit** when done.

The evaluation is added to the evaluation list. Because the directly supported land use selected was “pasture”, note that the land use is displayed as “pasture (protected)”.



All evaluations on a given PLU must be of the same land use type.

Evaluations Bar Overview

Once an evaluation has been created, it will appear in the Evaluations bar list under the Search tab. The Evaluations bar is where the user can select previous evaluations that have been started or completed for the client. The Evaluations bar displays the result type, the name, the land unit, the land use, acres, benchmark, date, and Id. The Evaluations bar also allows the user to edit, copy, or delete evaluations.

Result type: Displays standard or alternative evaluations based on whether the user selected final result type (alternative evaluations utilize input from stand alone tools).

Name: User defined

Land Unit: Customer Service Toolkit (CST) PLU identifying number, typically the FSA tract/field number

Acres: Size of PLU

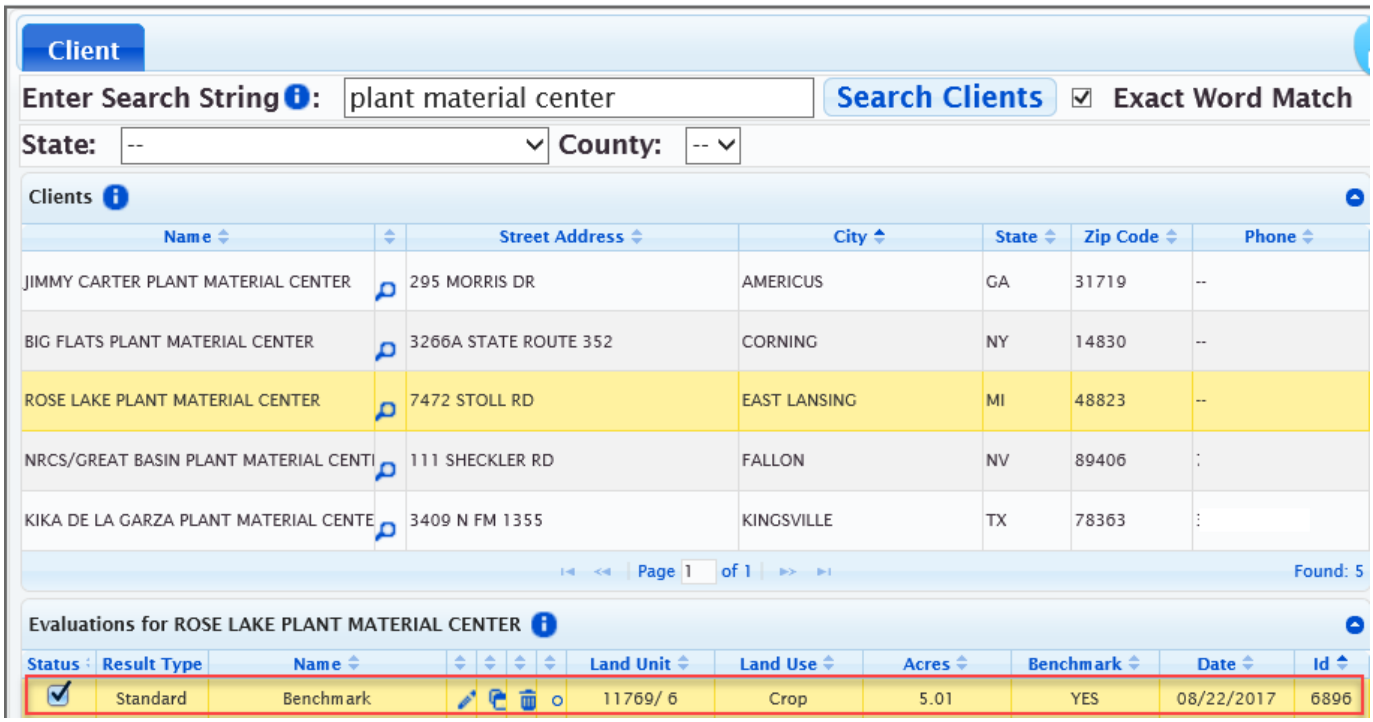
Benchmark: Yes/No flag identifying benchmark status

Date: Date evaluation performed (default date is the date evaluation was created but this may be modified by user to reflect the date the evaluation was performed in the field)

Id: RS identifying number for PLU

Evaluations Bar Walk-Through

Click on the desired evaluation to activate it.



Evaluations can be edited, copied, and pasted to another PLU, or can be deleted. Select the appropriate button to edit, copy, or delete an evaluation.

Edit Evaluation: Feature allows user to edit name and date of evaluation

Copy Evaluation: Feature allows user to copy an evaluation to run alternate scenarios on the existing PLU or transfer the management system defined in this evaluation to a new PLU

Delete Evaluation: Permanently deletes evaluation

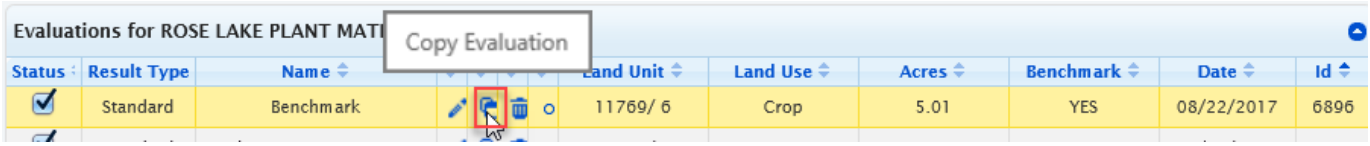
Copy Evaluation Feature Overview

The copy evaluation feature is available to copy an evaluation to evaluate and compare an alternative scenario or take the current management system that was evaluated and apply it to a different PLU. This feature allows copying to either the current client's PLU or any other PLU as identified by the user.

Any number of alternative evaluations or alternative scenarios may be attached to a PLU. Comparisons may be made against the benchmark evaluation or other alternative evaluations. In the evaluation results section, the user may directly compare two different evaluations on the same report.

Copy an Evaluation to the Current PLU

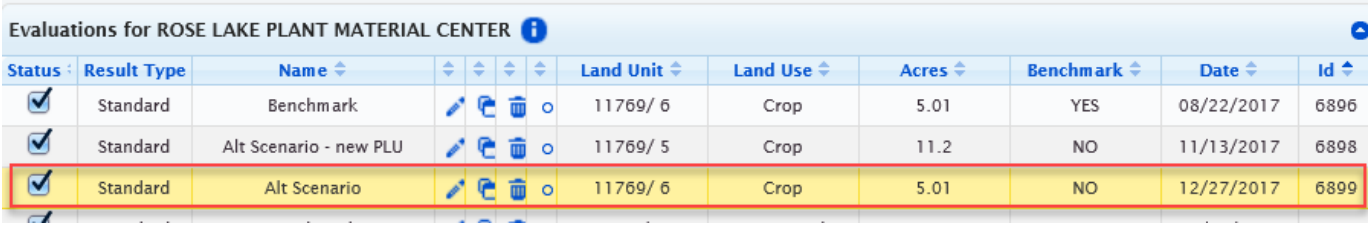
1. Copy an evaluation by clicking the **Copy Evaluation** button.



2. This opens an evaluation dialogue. To create an alternative scenario on the existing plan unit, enter the **Name** of the evaluation and edit the **Date** or **Benchmark** as appropriate. Click **Submit** when finished.

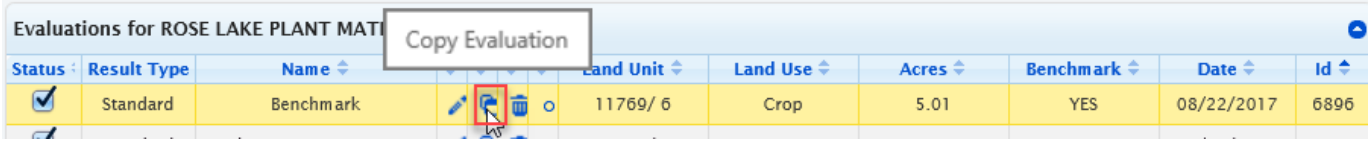
The tool defaults to copying an evaluation on the existing PLU.

3. Click on the evaluation to activate it.

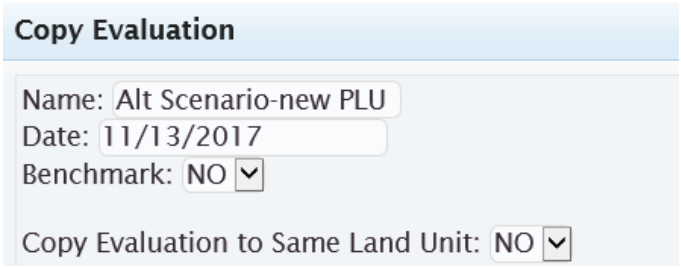


Copy an Evaluation to a Different PLU (Current Client or Different Clients)

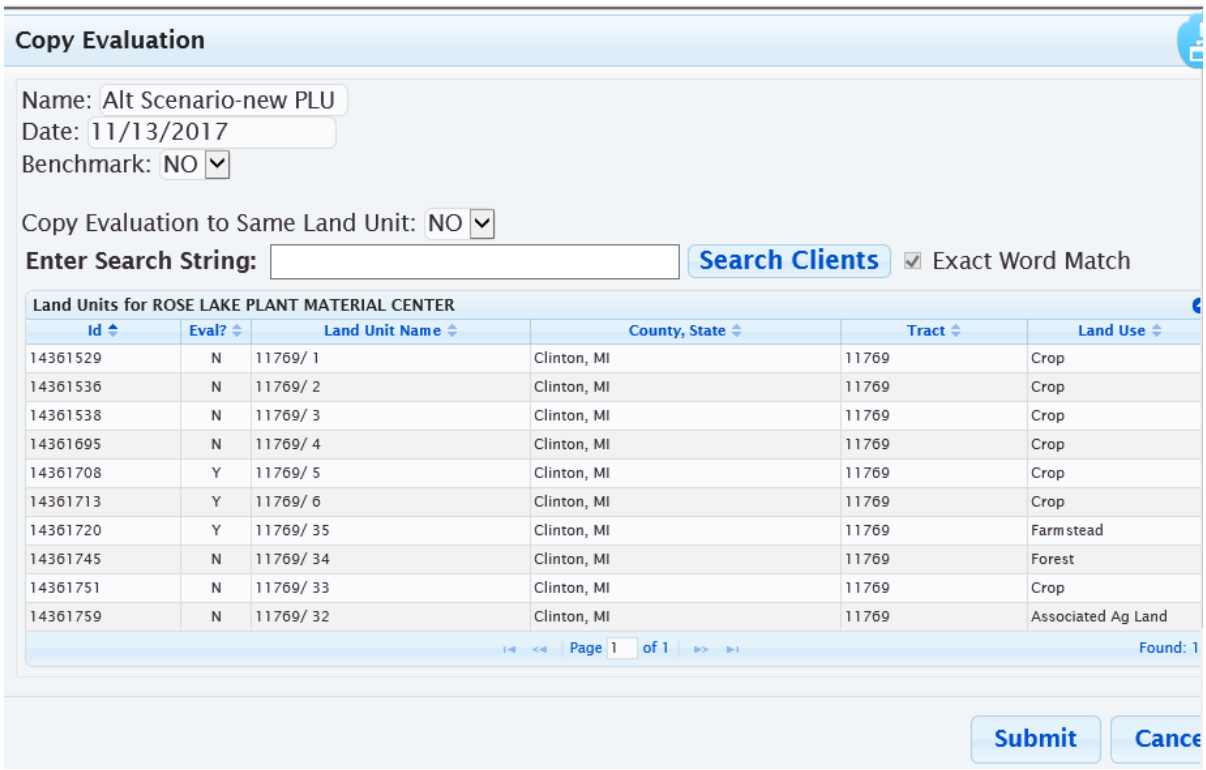
1. Copy an evaluation by clicking the **Copy Evaluation** button.



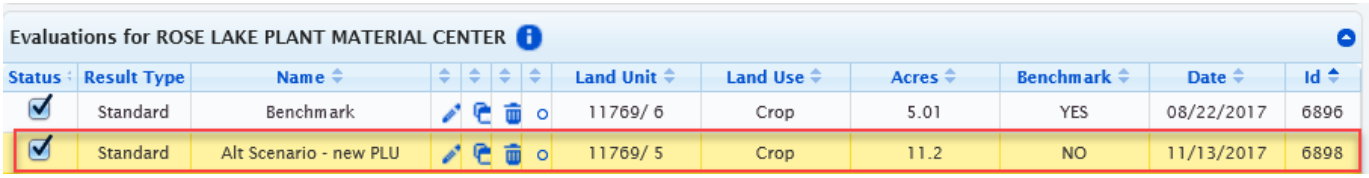
2. This opens an evaluation dialogue. Enter the **Name** of the evaluation and edit the **Date** or **Benchmark** as appropriate. To create an alternative scenario on a different PLU, select No for **Copy Evaluation to Same Land Unit**.



3. The evaluation dialogue box will display new land units under the existing client and the search feature to look for another client. Select either the different PLU or search for a new client and select the target PLU for that client. Click **Submit** when finished.



4. Click on the evaluation to activate it.

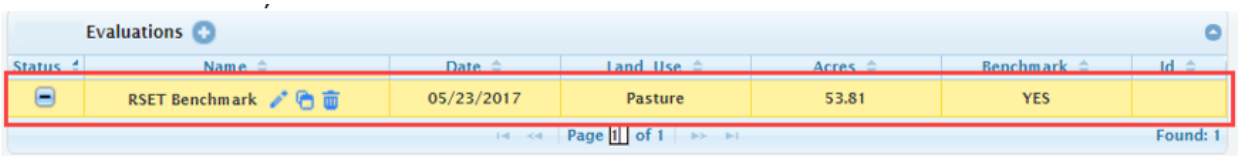


Pasture Inventory Overview

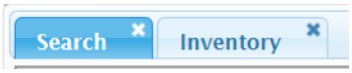
The Pasture Inventory evaluates the land units for site-specific vulnerabilities, which may affect the overall grazing program that includes all pastures and grazed lands in the Grazing Operation. Questions related to the overall Grazing Operation are answered in the Grazing Operation Evaluation (GOE). The Pasture Inventory results can differ between pastures in the same operation as the sensitivity of the land affects the results of each pasture. This can help prioritize the implementation of pasture improvements.

Pasture Inventory Walk-Through

1. From the **Search** bar, select the desired evaluation for the client.

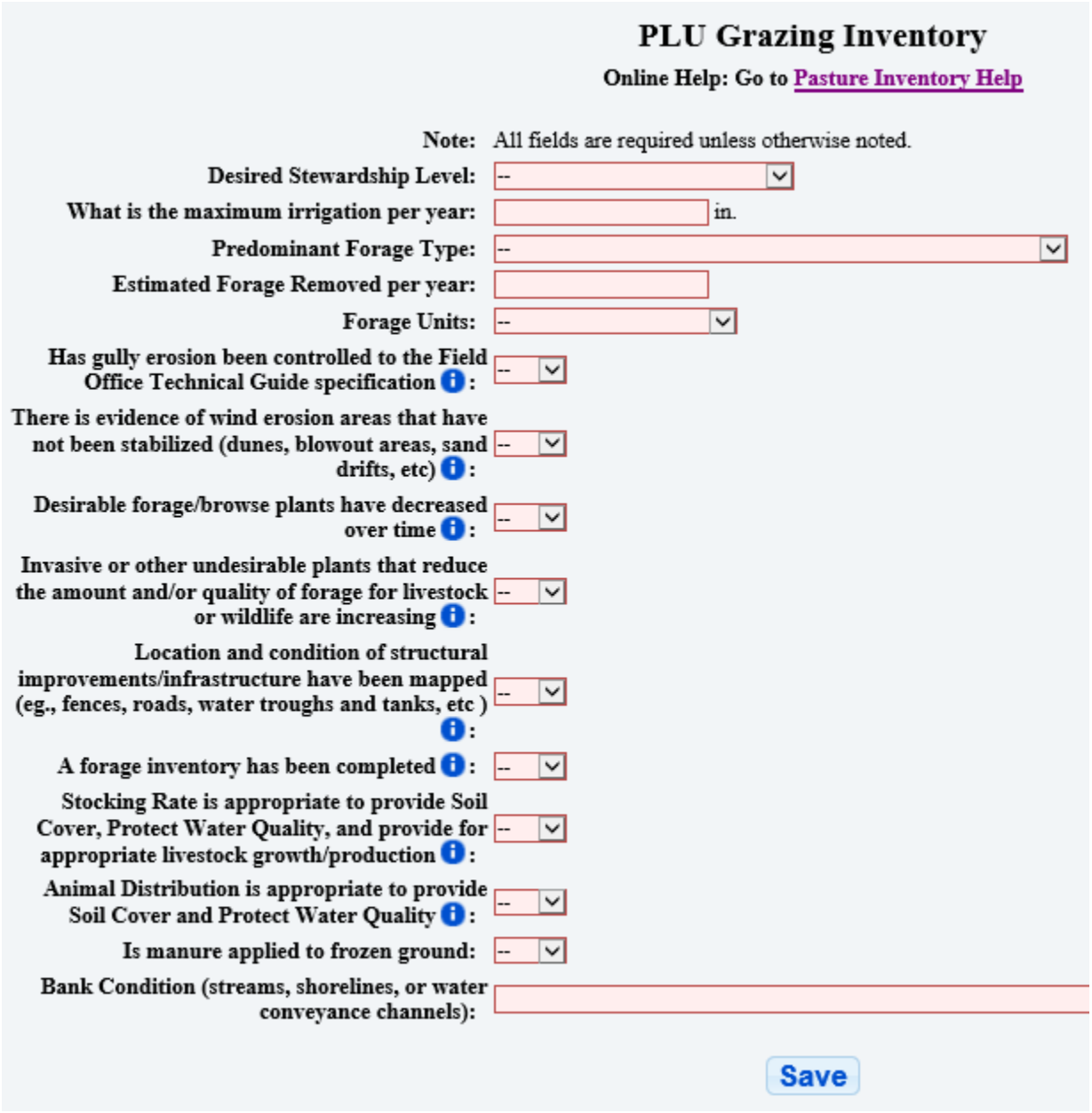


2. Click on the **Inventory** tab or select Inventory on the **Roadmap** .



3. Enter the PLU Grazing Inventory information and click the **Save** button.

   Note: If the value field is red it is required.



Desired Stewardship Level: National Resource Stewardship

What is the maximum irrigation per year: Numeric value (in inches)

Predominant Forage Type: Select answer from drop-down

a. Annual Forbs, cool season
b. Annual Forbs, warm season
c. Annual Grasses, cool season
d. Annual Grasses, warm season
e. Leguminous Forbs, cool season

f. Leguminous Forbs, warm season
g. Non-Leguminous Forbs, cool season
h. Non-Leguminous Forms, warm season
i. Perennial Bunch and Sod Grasses
j. Perennial Bunchgrasses
k. Perennial grass & Perennial legume mixed, cool, & warm season
l. Perennial Sod Grasses

Estimated Forage Removed per year: Numeric value (select measuring unit in following question)

Forage Units: Select answer from drop-down

a. Acres/Animal Unit Day
b. Acres/Animal Unit Month
c. Acres/Animal Units/Year
d. Animal Units Days/Acre
e. Animal Unit Month/Acre
f. Animal Units/Acre/Year
g. Pounds/Acre/Year
h. Tons/Acre/Year

Has gully erosion been controlled to the Field Office Technical Guide specification: Yes/No

Note: There is evidence of active, uncontrolled soil erosion

There is evidence of wind erosion areas that have not been stabilized (dunes, blowout areas, sand drifts, etc): Yes/No

Note: There is evidence of active, uncontrolled soil erosion

Desirable forage/browse plants have decreased over time: Yes/No

Note: Desirable forage/browse plants can be native or introduced species, but do not include plants recognized as invasive (per Presidential Executive Order 13112), noxious or toxic.

This applies to the local environment and in respect to grazing species. This can be a comparison of current species composition to previous years or the seeding plan. This is more easily looked at from the aspect of intermediate and undesirable forage species increasing as desirable species are being grazed out.

Invasive or other undesirable plants that reduce the amount and/or quality of forage for livestock or wildlife are increasing: Yes/No

Note: Invasive plants include those meeting the definition in Presidential Executive Order 13112. Undesirable plants are simply those not considered to be the best forage species available for livestock and/or wildlife consumption, due to factors such as poor quality, anti-foraging characteristics, etc.

Examples are plants such as woody invaders, noxious weeds, and toxic plants that are rejected by livestock or have undesirable side effects when eaten.

Location and condition of structural improvements/infrastructure have been mapped (e.g., fences, roads, water troughs and tanks, etc.): Yes/No

Note: The producer must be able to show written documentation supporting a Yes response.

This is usually completed by a conservation planner on an initial or follow-up site visit.

A forage inventory has been completed: Yes/No

Note: The forage inventory includes: species composition (or functional group composition); total plant production amount; available forage production amount. Actual clipping data, ocular estimates, and other production estimation sources (Extension, ESDs, etc.)

Stocking Rate is appropriate to provide Soil Cover, Protect Water Quality, and provide for appropriate livestock growth/production: Yes/No

This is usually completed by a conservation planner after site visit(s) and information is shared from the producer.

Animal Distribution is appropriate to provide Soil Cover and protect Water Quality: Yes/No

Note: The producer must be able to show written documentation supporting a Yes response.

This is usually assessed by a conservation planner during site visit(s). S/He will be looking for areas frequented by livestock to the point of degradation, such as shade and watering sources. Livestock trails to water/feed sources and shade also help indicate if animal distribution is not appropriate

Is manure applied to frozen ground: Yes/No

This would also include bio-solids and compost. Applications are usually applied with

a manure spreader and are not from the livestock being on the pasture. The exception for on-site manure would be from feeding areas or other heavy use areas that are scraped and spread.

Bank Condition (streams, shorelines, or water conveyance channels): Select answer from drop-down

a. Not Applicable (no water features/banks)
b. Banks are stable; protected by roots of natural vegetation, wood and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access.
c. Banks are moderately stable, protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation.
d. Banks are moderately unstable; very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Recreational and/or livestock use are contributing to bank instability.
e. Banks are unstable; no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability.

Bank condition is usually evaluated by a conservation planner during a site visit.

Resultant Factor and Threshold values are displayed.

Factor values determined:

Soil Leaching Potential
Soil Runoff Potential
R Factor

Threshold values determined:

Sediment in Surface Water
Surface Phosphorus Loss
Subsurface Phosphorus Loss
Surface Nitrogen Loss
Subsurface Nitrogen Loss
Pesticide Management (Leaching)

Pesticide Management (Solution Runoff)
Pesticide Management (Adsorbed Runoff)
Pesticide Management (Drift)
Land Health

Management Points are displayed for the following:

PLU Grazing Inventory
Residue – Sediment in Surface Water
Residue – Surface Phosphorus Loss
Residue – Surface Nitrogen Loss
Residue – Subsurface Nitrogen Loss
Residue – Pesticide Management (Leaching)
Residue – Pesticide Management (Solution Runoff)
Residue – Pesticide Management (Adsorbed Runoff)
Residue – Pesticide Management (Drift)
Winter Cover – Sediment in Surface Water
Winter Cover – Surface Phosphorus Loss
Winter Cover – Surface Nitrogen Loss
Winter Cover – Subsurface Nitrogen Loss
Winter Cover – Pesticide Management (Leaching)
Winter Cover – Pesticide Management (Solution Runoff)
Winter Cover – Pesticide Management (Adsorbed Runoff)
Winter Cover – Pesticide Management (Drift)
Nutrient Management – Surface Nitrogen Loss
Nutrient Management – Subsurface Nitrogen Loss
Nutrient Management – Surface Phosphorus Loss
Nutrient Management – Subsurface Phosphorus Loss

The Aquatic Habitat, Terrestrial Habitat, IPM, WINPST, Conservation Practices and Pasture Condition Score tabs are added.

Navigate through the assessment by clicking on the appropriate tab or by clicking on the **Roadmap** and choosing the appropriate assessment.

Pasture Condition Score Overview

Pasture condition scoring can be useful in deciding planning management or improvement actions. NRCS has a Guide to Pasture Condition Scoring and a Pasture Condition Scoresheet (PCS) that provide overall agency guidance on how to score pasture condition. Information from the PCS will be entered for the following 14 questions in Resource Stewardship. Answer choices "1-5" on the PCS correlate to "a-e" in the RS drop-down boxes.

Pasture Condition Score Walk-Through

1. Click the **Pasture Condition Score** tab or select Pasture Condition Score in the **Roadmap.**

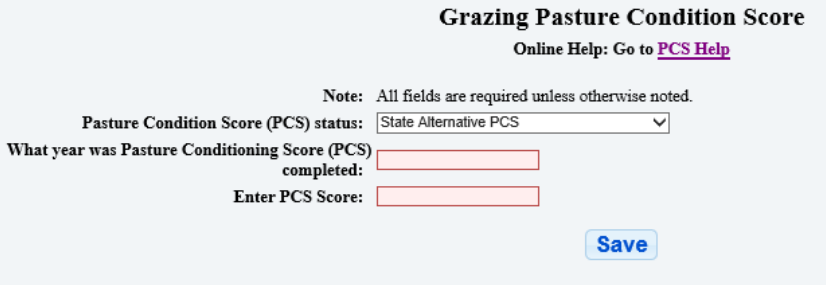
2. Enter the information on the Grazing Pasture Condition Score page and click the **Save**.

Pasture Condition Score (PCS) status: Select answer from drop-down

a. Insufficient information to complete a PCS
b. National PCS
c. State Alternative PCS

If a state/regional level Pasture Condition Scoresheet is used instead of

the national, enter the year the PCS was completed and the PCS score.



What year was Pasture Conditioning Score (PCS) completed: 4 digit year value

1. **Percent Desirable Plants**: Select answer from drop-down
    a. Desirable species make up <20% of the stand. Annual weeds and/or woody species dominate.
    b. Desirable species make up 20-40% of the stand. Mostly weedy annuals and/or woody species present and expanding. Shade is a factor.
    c. Desirable species make up 40-60% of the stand. Undesirable broadleaf weeds and annual weedy grasses invading. Some woodies.
    d. Desirable species make up 60-80% of the stand. Remainder mostly intermediates and a few undesirables present.
    e. Desirable species exceed 80% of the stand. Scattered intermediates.

2. **Plant Cover**: Select answer from drop-down
    a. Canopy <50%. Basal area <15%. Photosynthetic area very low. Very little plant cover to slow or stop runoff.
    b. Canopy 50-75%. Basal area 15-25%. Photosynthetic area low. Vegetal retardance to runoff low.
    c. Canopy 70-90%. Basal area 25-35%. Most forages grazed close, little leaf area to intercept sunlight. Moderate vegetal retardance.
    d. Canopy 90-95%. Basal area 35-50%. Spot grazed low and high so some loss of photosynthetic potential. Vegetal retardance still high.
    e. Canopy 95-100%. Basal area >50%. Forages maintained in leafy condition for best photosynthetic activity. Very thick stand, slow, or no runoff flows.

3. **Plant Diversity**: Select answer from drop-down
    a. One dominant (>75% or DM wt.) forage species. Or, over 5 forage species (all <20%) from one dominant functional group, not evenly grazed – poorly distributed.
    b. Two to five forage species from one dominant functional group (.75% of DM wt.). At least one avoided by livestock permitting presence of mature seed stalks. Species in patches.
    c. Three forage species (each =>20% DM wt.) from one functional group. None avoided. Or, one forage species from each of two functional groups, both

supply 25-50% of DM weight.
   d. Three or four forage species (each =>20% DM wt.) with at least one being a legume. Well intermixed compatible growth habit, and comparable palatability.
   e. Four or five forage species representing three functional groups (each =>20% of DM wt.) with at least one being a legume. Intermixed well, compatible growth habit, and comparable palatability.

4. **Ground Cover Residue**: Select answer from drop-down
   a. No identifiable residue present on soil surface. Or, heavy thatch evident (>1 inch thick).
   b. 1-10% covered with dead leaves or stems. Or, thatch 0.5-1 inch thick.
   c. 10-20% covered with dead residue. Or, slight thatch buildup but <0.5 inch thick.
   d. 20-30% covered with dead residue. No thatch present.
   e. 30-70% covered with dead residue, but thatch buildup.

5. **Standing Dead Forage**: Select answer from drop-down
   a. >25% of air dry weight.
   b. 15-25% of air dry weight.
   c. 5-15% of air dry weight.
   d. Some present, but <5% if air dry weight.
   e. None available to grazing animal.

6. **Plant Vigor**: Select answer from drop-down
   a. No recovery after grazing or pale yellow or brown, or permanent wilting, or plant loss due to insects or disease, exercise lot only. Or, lodged, dark green overly lush forage. Often avoided by grazers.
   b. Recovery after grazing takes 2 or more weeks longer than normal, or yellowish-green leaves, or major insect or disease yield loss, or plants wilted most of day. Productivity very low.
   c. Recovery after grazing takes 1 week longer than normal, or urine/dunk patches dark green in contrast to rest of plants, or minor insect or disease loss, or mid-day plant wilting. Yields regularly below site potential.
   d. Recovery after grazing takes 1-2 days longer than normal, or light green plants among greener urine and dung patches, or minor insect or disease damage. No plant wilting. Yields near site potential.
   e. Rapid recovery after grazing. Healthy green color. No signs of insect or disease damage. No leaf wilting. Yields at site potential for the species adapted to site's soil and climate.

7. **Percent Legume**: Select answer from drop-down
   a. <10% by weight. Or, greater than 60% of bloating legumes.
   b. 10-19% legumes. Or, losing grass, 40-60% spreading legumes.
   c. 20-29% legumes.
   d. 30-39% legumes.

e. 40-60% legumes. No grass loss; grass may be increasing

8. **Uniformity of Use**: Select answer from drop-down
    a. Little-grazed patches cover over 50% of the pasture. Mosaic pattern throughout or identifiable areas of pasture avoided.
    b. Little-grazed patches cover 25-50% of the pasture either in a mosaic pattern or obvious portion is not frequented.
    c. Little-grazed patches cover 10-25% of the pasture either in a mosaic pattern or obvious portion is not frequented.
    d. Little-grazed patches minor sports where isolated forage species is rejected. Urine and dung patches avoided.
    e. Rejected areas only at urine and dung patches. No forage species rejection.

9. **Livestock Concentration**: Select answer from drop-down
    a. Livestock concentration areas cover >10% of the pasture; or all convey contaminated runoff directly into water channels.
    b. Livestock concentration areas and trails cover 5-10% of the pasture; most close to water channels and drain into them unbuffered.
    c. Isolated livestock concentration areas and tails cover <5% of the area, one close to water channel and drains into it unbuffered.
    d. Some livestock trails and one or two small concentration areas. Buffer areas between them and channels.
    e. No presence of livestock concentration areas or heavy use areas sited or treated to minimize contaminated runoff.

10. **Soil Compaction**: Select answer from drop-down
    a. Infiltration capacity and surface runoff severely affected by heavy compaction. Excessive livestock traffic killing plants over wide areas. Very hard to push probe into soil without damaging the probe.
    b. Infiltration capacity lowered and surface runoff increased due to large areas of bare ground and dense compaction layer at the surface. Livestock trails common throughout. Off-trail hoof prints common. Hard to push probe past compacted layer.
    c. Infiltration capacity lowered and surface runoff increased due to plant cover loss and soil compaction by livestock hooves. Soil resistant to soil probe entry at one or more depths within plow depth.
    d. Infiltration capacity lowered and surface runoff increased due to reduced vegetal cover/retardance. Probe enters soil easily except at rocks. Scattered signs of livestock trails and hoof prints, confined to lanes or small, wet areas.
    e. Infiltration capacity and surface runoff are equal to that expected for an ungrazed meadow; not affected by livestock traffic

11. **Sheet and rill erosion**: Select answer from drop-down
    a. Sheet and rill erosion is active throughout the pasture; rills 3-8 inches deep at close intervals and/or grazing terracettes are closely spaced with some

slope slippage.

b. Most sheet and rill erosion confined to steepest terrain of unit; well defined rills 0.5-3 inches deep at close intervals and/or grazing terracettes present.
c. Most sheet and rill erosion confined to heavy use areas, especially in loafing areas and water sites; rills 0.5-3 inches deep. Debris fans at downslope edge.
d. No current formation of rills; some evidence of past rill formation, but are grassed. Scattered debris dams of littler present occasionally.
e. No evidence of current or past formation of sheet flow or rills.

12. **Wind Erosion**: Select answer from drop-down
    a. Blowouts or dunes forming or present.
    b. Soil swept from the established pasture being rated causing plant death by burial or abrasion.
    c. Soil swept from adjacent fields or pasture during seedbed preparation and seedling growth to pasture plant death by burial or abrasion.
    d. Some vegetation debris windrowed. Some dust deposition from offsite source. Minor wind damage to foliage.
    e. No visible signs of windblown soil or trash. No wind related leaf damage.
    f. Not applicable

13. **Streambank or shoreline erosion**: Select answer from drop-down
    a. Streambanks most bare and sloughing. No native streambank or shoreline vegetation remaining.
    b. Streambanks are heavily grazed and trampled all over. Many are actively eroding laterally. Little native streambank or shoreline vegetation. Bank sloughing common.
    c. Streambanks are closely grazed, but few are stable. Some native streambank or shoreline vegetation remaining. Livestock enter only at specific points, but heavily used. Remote alternative water site present.
    d. Streambanks are grazed but stable. Mix of pasture plants and native water's edge species. Muddy livestock stream crossing(s) or pond entrance(s) not used heavily. Alternative water sites present.
    e. Streambanks ungrazed or grazed infrequently. Abundant streambank or shore loving vegetation. Gravelly or constructed stable livestock stream crossing(s) or watering ramp(s). Or, alternative water sources present and close-by.
    f. Not applicable.

14. **Gully Erosion**: Select answer from drop-down
    a. Mass movement of soil, rock, plants, and other debris; occurrence of landslides, debris avalanches, slumps and earthflow, creep and debris torrents. Found in mountainous or very hilly terrain.
    b. Gully(s) advancing upslope cutting long channel(s). Revegetation difficult without using constructed structures and livestock exclusion; continuous gully(s) with many finger-like extensions into the hillside.

c. Gully(s) present with scattered active erosion, vegetation missing at heavy use slopes and/or on bed below overfalls. New eroding channels present and new overfalls appearing along sides and bed of main channel.
d. One or more existing stable gullies present, vegetation covers gully bottom and slopes well; no visual signs of active cutting at gully head or sides. Some soil moved in channel bottom.
e. No gullies present; natural drainage ways are stable grassed channels. Spring or seep fed bare channels are small and stable, often covered with overhanging vegetation
f. Not applicable

Management Points are displayed for the following:

Pasture Management Score

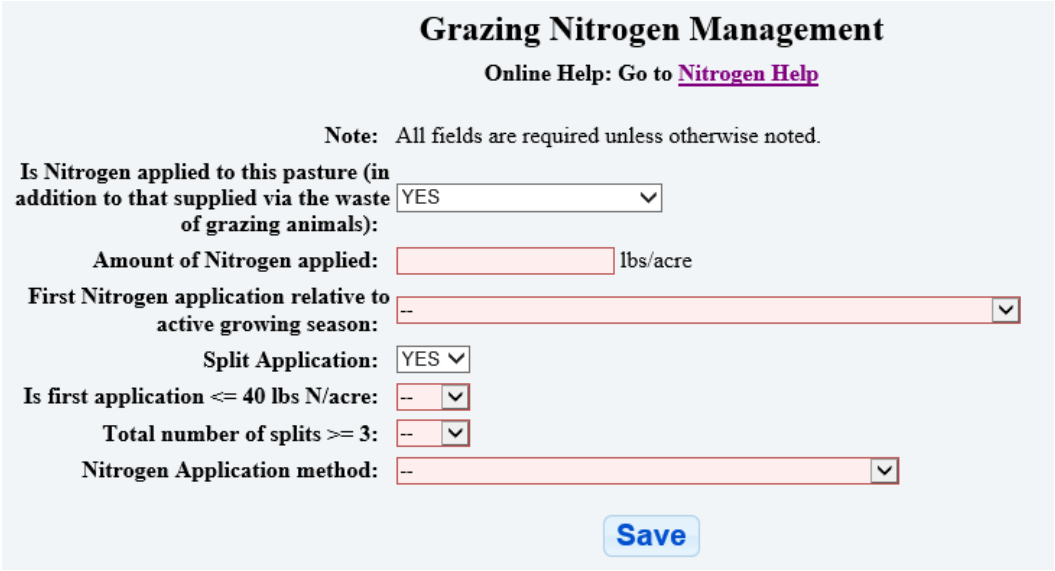
Nitrogen Overview

The Nitrogen section in Resource Stewardship is only completed for Crop and Pasture evaluations. Both nitrogen and phosphorus comprise the nutrient management information captured in Resource Stewardship.

Grazing Nitrogen Walk-Through

1. Open the **Roadmap** and select Nitrogen or click on the **Nitrogen** tab at the top of the page.

2. Answer the questions for Grazing Nitrogen Management and click **Save**.



Is Nitrogen applied to this pasture: Yes/No/Yes, but no detail available

The "Yes, but no detail available" resulting management points are zero or negative.

Amount of Nitrogen applied: Amount lbs/acre

First Nitrogen application relative to active growing season: >30 days after the active growing season ends; >30 days before active growing season; > 7 but <=30 days before active growing season; During the active growing season; End of active growing season to 30 days after the end of growing season.

Split Application: Yes/No

Nitrogen application method: Fertigation; Immediate incorporation, banded, or injected; Surface application with incorporation (within 48 hours);

Surface broadcast with incorporation (within 24 hours); Surface broadcast, no incorporation

A Nitrogen Supplied/Removed Ratio will be established and Management Points will be returned for the following:

Nutrient Management – Subsurface Nitrogen Loss
Nutrient Management – Surface Nitrogen Loss

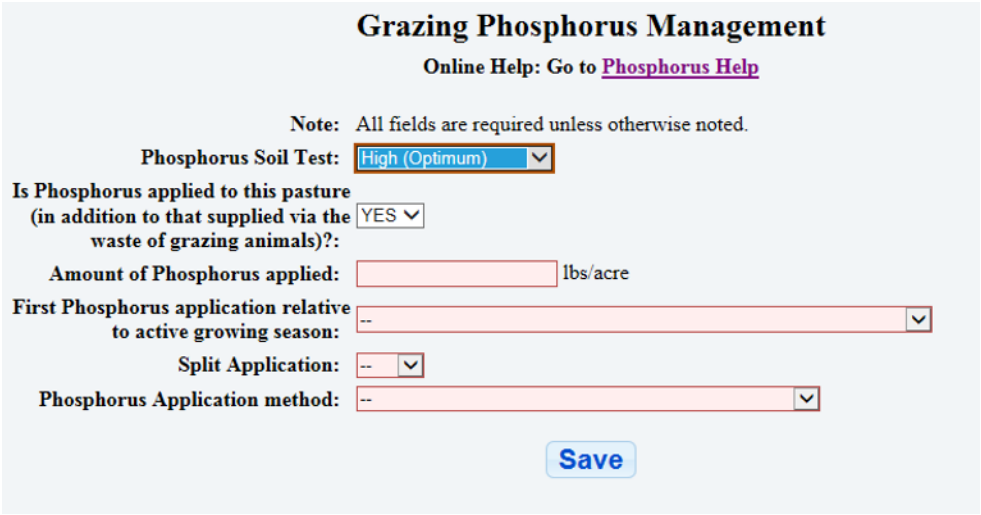
Phosphorus Overview

Like Nitrogen, the Phosphorus section in Resource Stewardship is only completed for Crop and Pasture evaluations.

Grazing Phosphorus Walk-Through

1. Click on the **Phosphorus** tab or select Phosphorus in the **Roadmap** .

2. Answer the questions for Grazing Phosphorus Management and click **Save**.



Phosphorus Soil Test: Excessive/Very High; High (Optimum); Low; Medium; No Test

Is Phosphorus applied to this pasture (in addition to that supplied via the waste of grazing animals)?: Yes/No (If No, skip remaining questions)

Amount of Phosphorus applied: Numeric value in lbs/acre. Must be an integer from 0 to 99999

First Phosphorus application relative to active growing season: >30 days after the active growing season ends; >30 days before active growing season; > 7 but <=30 days before active growing season; During the active growing season; End of active growing season to 30 days after the end of growing season.

Split Application: Yes/No

Is first application <=25lbs N/acre: Yes/No

Phosphorus Application Method: Fertigation; Immediate incorporation, banded, or

injected; Surface application with incorporation (within 48 hours); Surface broadcast, no incorporation

A Phosphorus Supplied/Removed Ratio will be established and Management Points will be returned for the following:

Nutrient Management – Surface Phosphorus Loss
Nutrient Management – Subsurface Phosphorus Loss

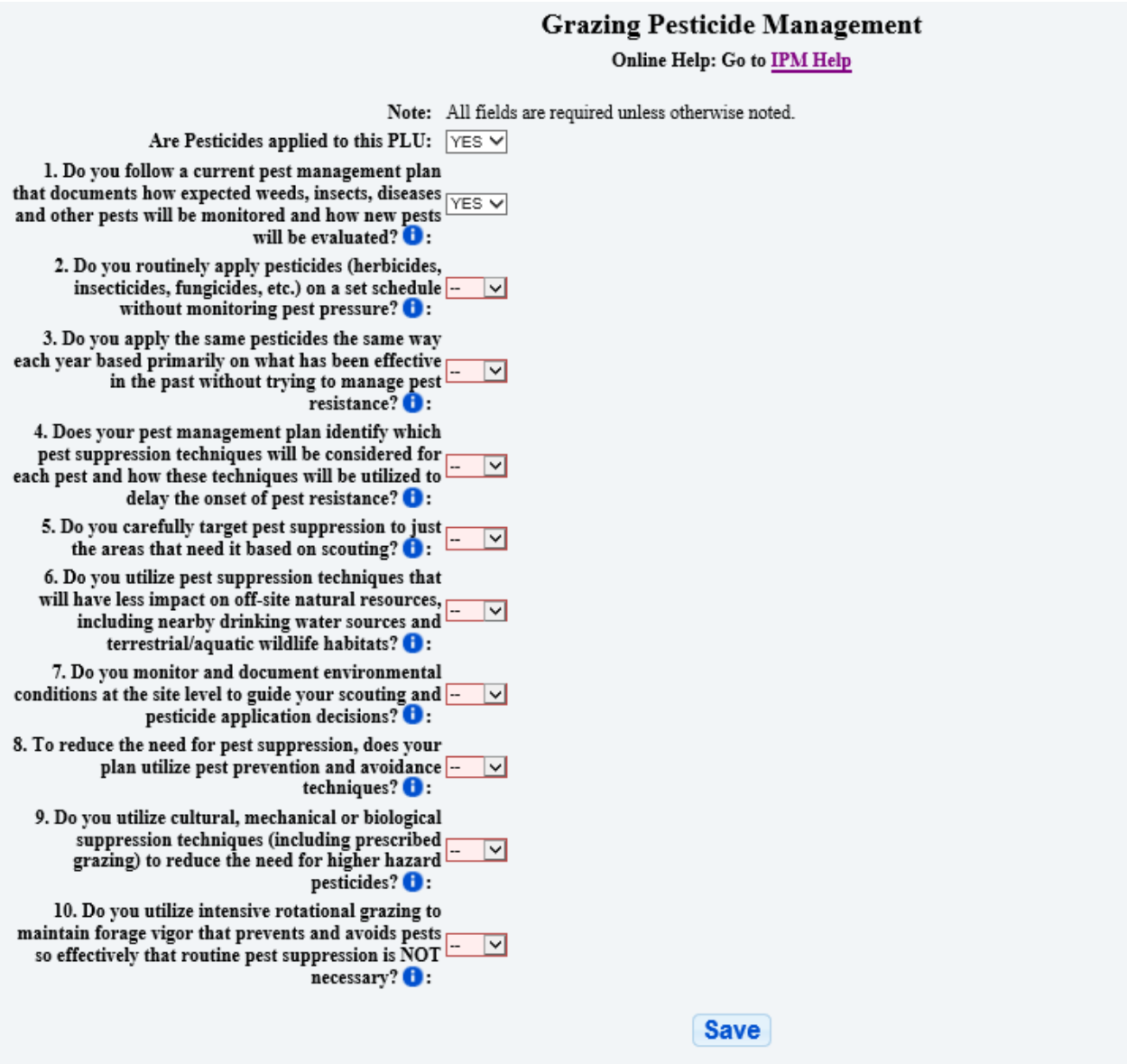
IPM Overview

The interpretation of "Integrated Pest Management (IPM) Plan" for Pasture and Range evaluations in Resource Stewardship simply refers to any type of pest management plan, not necessarily an NRCS-developed IPM Plan like Crop Resource Stewardship Evaluations require. If the producer has a basic plan/approach for applying pesticides on the site, credit will be given for having an "IPM plan" for purposes of Resource Stewardship on grazing lands.

IPM Walk-Through

1. Click the Integrated Pest Management **(IPM)** tab or select IPM in the **Roadmap** .

2. Answer Yes/No to **Are Pesticides applied to this PLU**. If No, skip the remaining IPM questions. If Yes, answer the following questions.



1. **Do you follow a current pest management plan that documents how expected weeds, insects, diseases, and other pests will be monitored and how new pests will be evaluated?:** Yes/No

   If No, skip the remaining IPM questions. If Yes, answer the following questions.

   Note: The pest management plan should be less than 3 years old and include monitoring plans and pest suppression decision criteria (action thresholds) for all expected weeds, insects, and diseases, and other pests.

2. **Do you routinely apply pesticides (herbicides, insecticides, fungicides, etc.) on a set schedule without monitoring pest pressure?:** Yes/No

Note: This does not include a single pesticide application ahead of time to help manage a universal pest, like treating seeds with a fungicide to help prevent soil-borne diseases.

3. **Do you apply the same pesticides the same way each year based primarily on what has been effective in the past without trying to manage pest resistance?:** Yes/No

   Note: This includes using the same or similar pesticide chemistry year after year without rotating active ingredient mode of action.

4. **Does your pest management plan identify which pest suppression techniques will be considered for each best and how these techniques will be utilized to delay the onset of pest resistance?:** Yes/No

   Note: This includes a list of all probable pest suppression techniques (synthetic pesticides, organic pesticides, biological/mechanical/cultural controls, etc.) that will be considered for each pest and how different suppression techniques will be rotated to manage pest resistance.

5. **Do you carefully target pest suppression to just the areas that needs it based on scouting?**: Yes/No

   Note: Based on scouting, economic injury thresholds, and other IPM principles that are specific to a particular grazing system and its pests. Prescribed pest suppression techniques are only utilized when and where they are absolutely necessary.

6. **Do you utilize pest suppression techniques that will have less impact on off-site natural resources, including nearby drinking water sources and terrestrial/aquatic wildlife habitats:** Yes/No

   Note: This includes pest management systems that preferentially utilize things such as pesticides with lower WINPST soil/pesticide hazard ratings, pesticides with less impact on pollinator, and reduced tillage for weed control to limit the potential for sediment loss.

7. **Do you monitor and document environmental conditions at the site level to guide your scouting and pesticide application decisions?:** Yes/No

   Note: This includes monitoring temperature, rainfall, relative humidity, and wind speed at the site level as well as monitoring the weather forecast so pesticide applications can be timed to minimize the potential for offsite losses via wind and water.

8. **To reduce the need for pest suppression, does your plan utilize pest prevention and avoidance techniques?:** Yes/No

   Note: Pest prevention and avoidance techniques include managing forage to prevent weed establishment, using pest-free seeds, using pest resistance varieties, cleaning tillage and harvesting equipment between sites, and eliminating alternate hosts for insect pests or disease organisms.

9. **Do you utilize cultural, mechanical, or biological suppression techniques (including prescribed grazing) to reduce the need for higher-hazard pesticides?:** Yes/No

   Note: This includes pest management systems that preferentially substitute cultural, mechanical, or biological suppression techniques (including prescribed grazing) in place of synthetic or organic pesticides to reduce pesticide use. When pesticides are needed, those with lower WINPST soil/pesticide hazard ratings are preferred.

10. **Do you utilize intensive rotational grazing to maintain forage vigor that prevents and avoids pests so effectively that routine pest suppression is NOT necessary?:** Yes/No

    Note: This is a high level management system that is difficult to achieve. It relies on very careful management to prevent and avoid pests so effectively that routine pest suppression (including synthetic or organic pesticide use and soil disturbing tillage) is not necessary.

3. Click **Save**.

   Management Points are displayed for the following:

   IPM Pesticide Management (Adsorbed Runoff)
   IPM Pesticide Management (Drift)
   IPM Pesticide management (Leaching)
   IPM Pesticide Management (Solution Runoff)

WINPST Online Overview

WINPST is an environmental risk screening tool for pesticides. It can be used to evaluate potential pesticides that move with water or eroded soil/organic matter and affect non-targeted organisms.

WINPST data that was captured in Resource Stewardship prior to September 2017 can be found in the Legacy (Manual) tab. The Legacy (Manual) tab also allows the manual entry of WINPST data captured outside of Resource Stewardship.

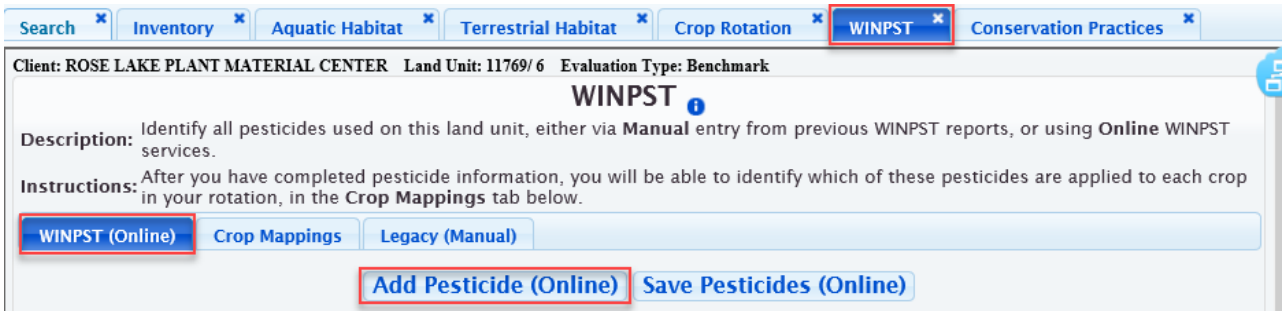
For Crop Evaluations, all probable pesticides should be selected in WINPST for each crop in the rotation. The same pesticide may be used differently on the same crop at different times, so a given pesticide may need to be selected in WINPST more than once with different application parameters, even when WINPST reports are developed for each crop.

WINPST Online Walk-Through

1. Select the **WINPST** tab or select WINPST on the **Roadmap** .

2. Select **WINPST (Online)**

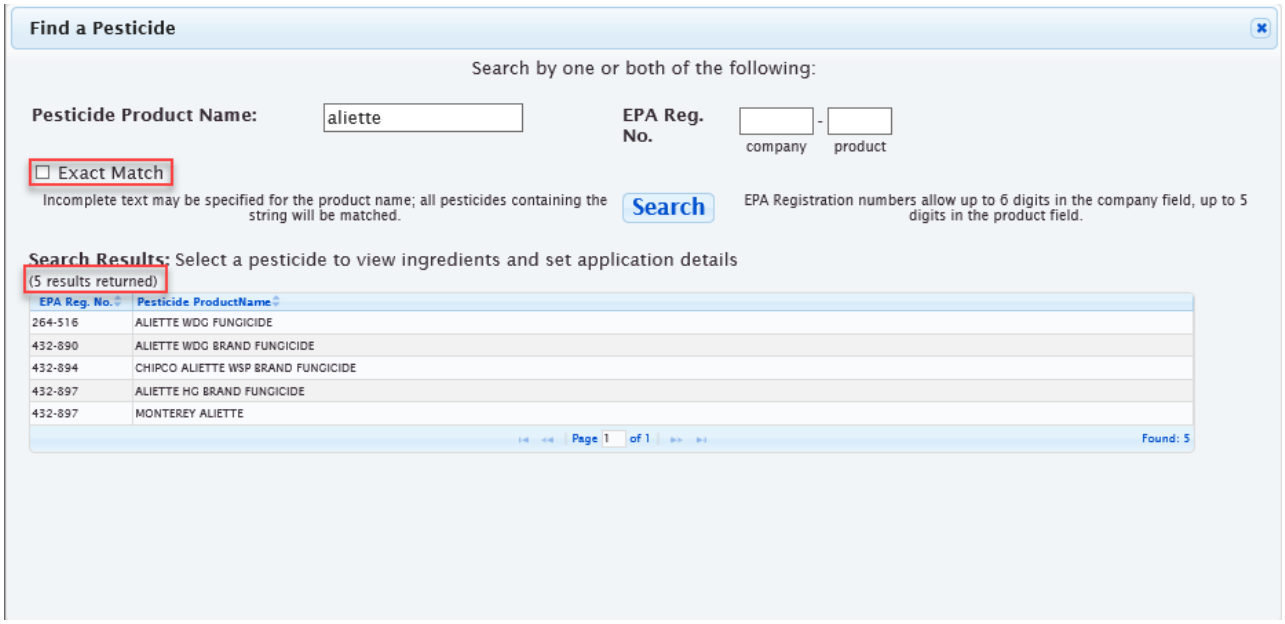
3. Click **Add Pesticide (Online)** for each pesticide you want to search for and add.



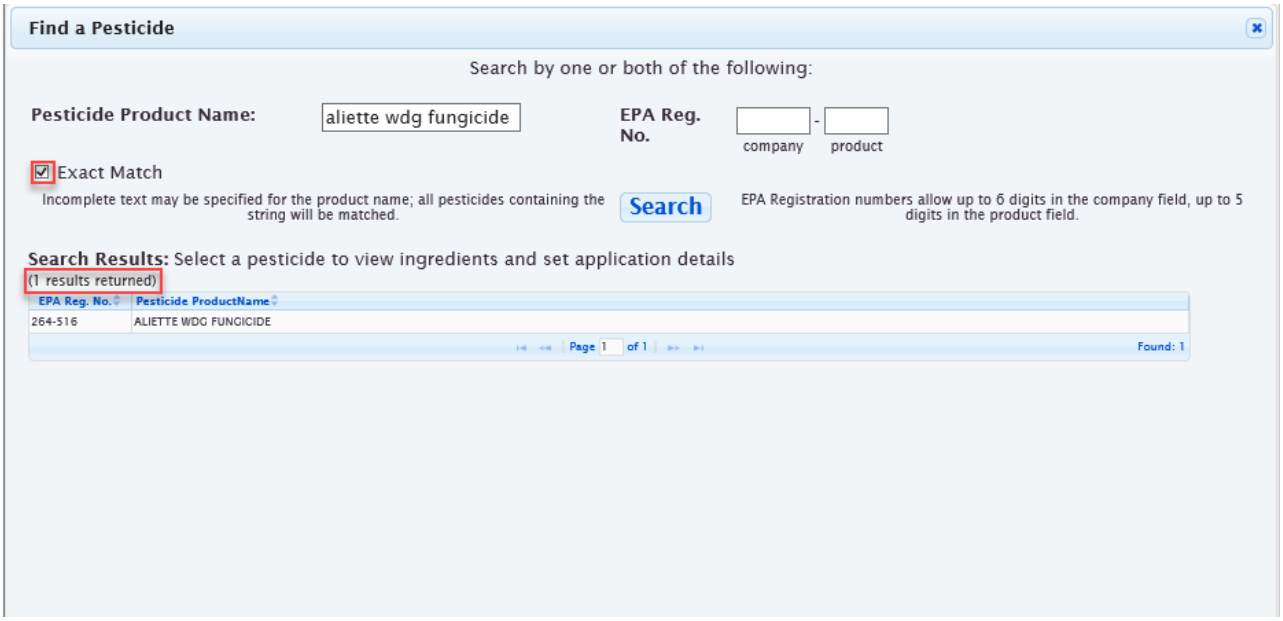
4. Search for the pesticides in the EPA database and click on it to select it.

   Enter all or part of a pesticide product name. Users can also enter a company or product code (or both). A complete EPA registration number for the company and/or product code must be entered (entering 52 will not match products with the code 523-445).

The below example shows the search results of a partial match of a pesticide product name.

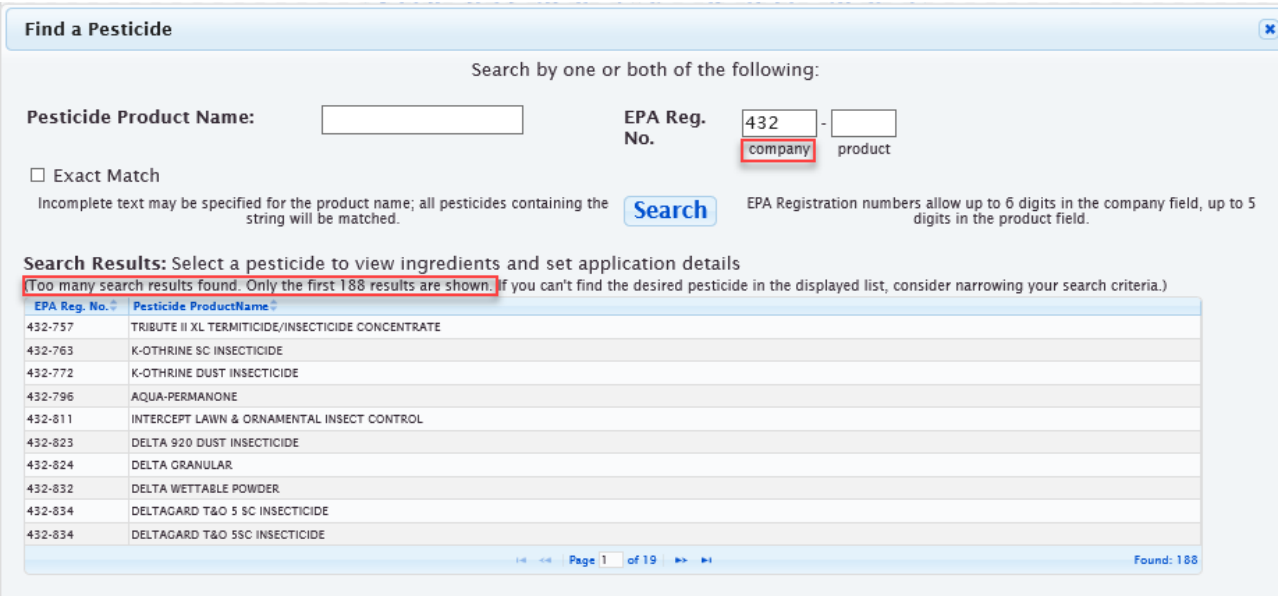


The below example shows the search results for the exact match of a pesticide product name (in general, fewer results will be returned when **Exact Match** is selected for the search).

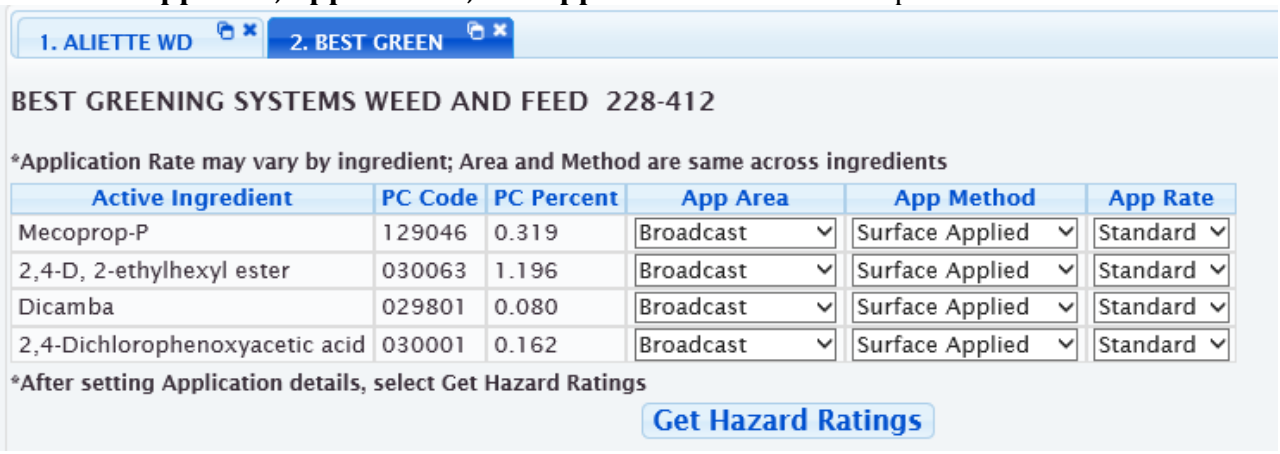


The below example shows the results of a complete match (company 3-digit number and product 3-digit number) of an EPA registration number. Note that multiple products can be returned for the same registration number.

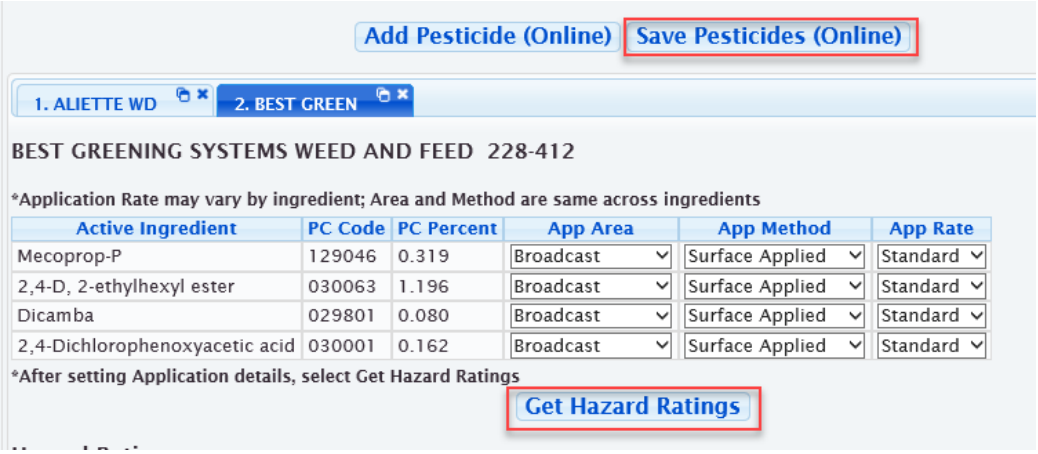
The below example shows the results for a company match by EPA registration number (in general, more results will be returned if a 3-digit product number is not also included in the search).



5. Select the **App Area**, **App Method**, and **App Rate** details for each pesticide.



6. Click **Get Hazard Ratings** and click **Save Pesticides (Online)** for each Pesticide tab added. (Repeat Steps 1 -6 for each additional pesticide.)



Note: The application rate can vary between active ingredients. While active ingredient hazard ratings are shown, only the pesticide product level ratings are used in Resource Stewardship.

Management Points are returned for the following:

WINPST – Pesticide Management (Leaching)
WINPST – Pesticide Management (Solution Runoff)
WINPST – Pesticide Management (Adsorbed Runoff)

WINPST Manual Entry Overview

To enter WINPST data manually, look through all the ratings in the Soil/Pesticide Interaction Hazard Rating Report to identify the worst-case (highest risk) result in each category (Leaching – Human, Leaching - Fish, Solution Runoff – Human, Solution Runoff – Fish, and Adsorbed Runoff – Fish) for all planned pesticides for a crop on all planned land unit (PLU) soils. Circle each of those worst-case ratings on the WINPST report for documentation and then select those five worst case ratings in Resource Stewardship in the WINPST data entry screen. Note that the highest hazard ratings for each of the five categories may be different for different soils and/or different pesticides.

Note: Selecting pesticides in WINPST by product name can sometimes select multiple active ingredients. Each active ingredient has its own unique hazard rating, so a product should be represented by the worst case (highest risk) rating for each category for all the product's active ingredients.

Ratings reported in WINPST:
Very Low (V)
Low (L)
Intermediate (I)
High (H)
eXtra High (X)

Soil / Pesticide Interaction Loss Potential and Hazard Rating Report

LEGEND

X -- eXtra high
H -- High
I -- Intermediate
L -- Low
V -- Very low

Conditions that affect ratings:

(none)	-- Broadcast application (default); applied to more than 1/2 the field
b	-- Banded application; applied to 1/2 the field or less
p	-- Spot application; applied to 1/10th of the field or less
(none)	-- Surface applied (default); applied to the soil surface
i	-- Soil incorporated; with light tillage or irrigation
f	-- Foliar application; directed spray at nearly full crop/weed canopy
(none)	-- Standard application rate (default); greater than 1/4 lb/acre
l	-- Low rate of application; 1/10 to 1/4 lb/acre
	-- Ultra Low rate of application; 1/10 lb/acre or less
m	-- There are surface connected macropores (cracks) that go at least 24 inches deep.
w	-- The high water table comes within 24" of the surface during the growing season.
s	-- The field slope is greater than 15%.
<none>	-- Default condition for all climates that have rainfall/irrigation after pesticide application
<dry>	-- Exception for arid climates that have a low probability of rainfall and no irrigation afer pesticide application

SPISP II I-Ratings:

Leaching	-- Soil / Pesticide Interaction Leaching Potential
Solution	-- Soil / Pesticide Interaction Solution Runoff Potential
Adsorbed	-- Soil / Pesticide Interaction Adsorbed Runoff Potential

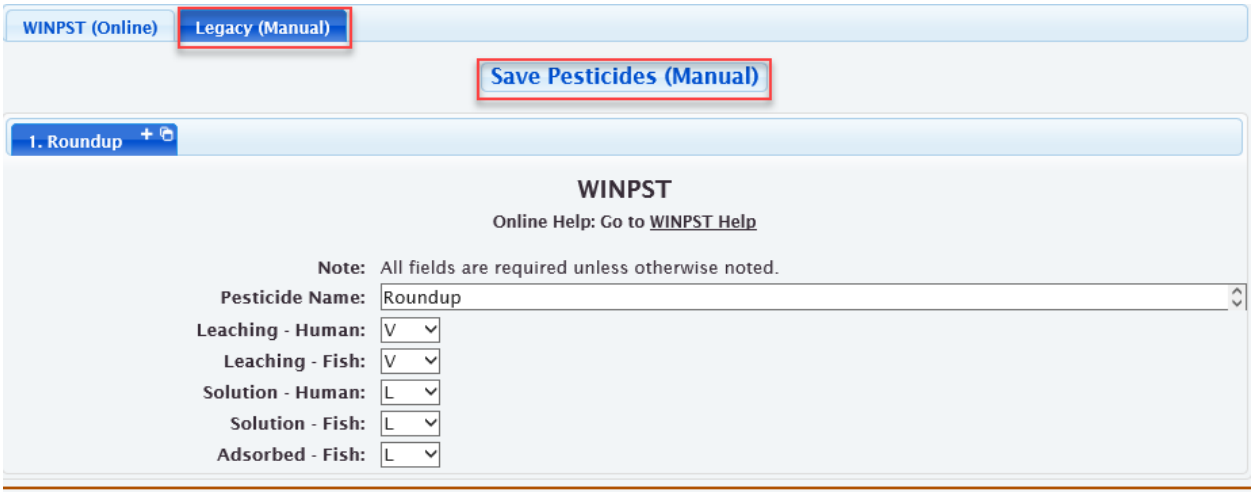
WINPST Manual Entry Walk-Through (Pasture and Range Example)

This example uses Roundup and Weedmaster.

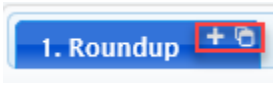
Pesticide Name	Roundup	Weedmaster
Leaching – Human	Very Low (V)	Very Low (V)
Leaching – Fish	Very Low (V)	Very Low (V)
Solution Runoff – Human	Low (L)	Very Low (V)
Solution Runoff – Human	Low (L)	Low (L)
Adsorbed Runoff – Fish	Low (L)	Very Low (V)

1. Click on the **WINPST** tab or select WINPST on the **Roadmap**  .

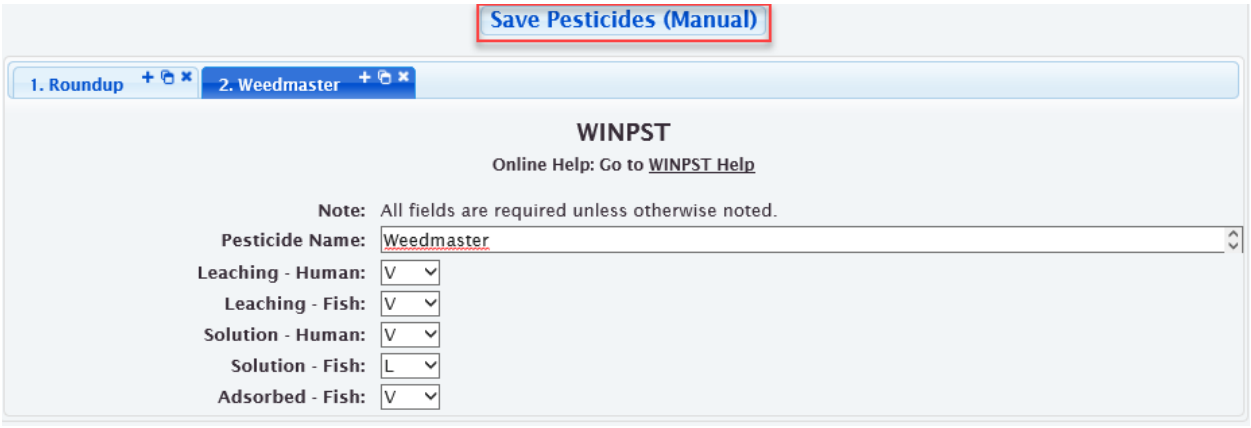
2. On the **Legacy (Manual)** tab, type the Pesticide Name (this example uses Roundup) and enter the pesticide hazard ratings gathered from the Soil/Pesticide Interaction Hazard Rating Report. Click **Save Pesticides (Manual)** when finished.



On the tab showing the first pesticide you entered, click the **Add tab** or **Copy** feature to add additional pesticides. The Copy feature allows users to copy over pesticide information and make any necessary edits to the pesticide name or hazard ratings.



3. On Tab 2, enter the Pesticide Name and Hazard Ratings information for **Weedmaster**. Click **Save Pesticides** when finished.



Management Points are returned for the following:

WINPST – Pesticide Management (Leaching)
WINPST – Pesticide Management (Solution Runoff)
WINPST – Pesticide Management (Adsorbed Runoff)

Conservation Practices Overview

Information for the Conservation Practices and Management Techniques (CPMT) section is gathered from the client. CMPTs can be chosen from the open-ended list in Resource Stewardship based on what has been implemented on the Planned Land Unit (PLU). For Crop evaluations, these CPMTs are identified at the crop rotation level.

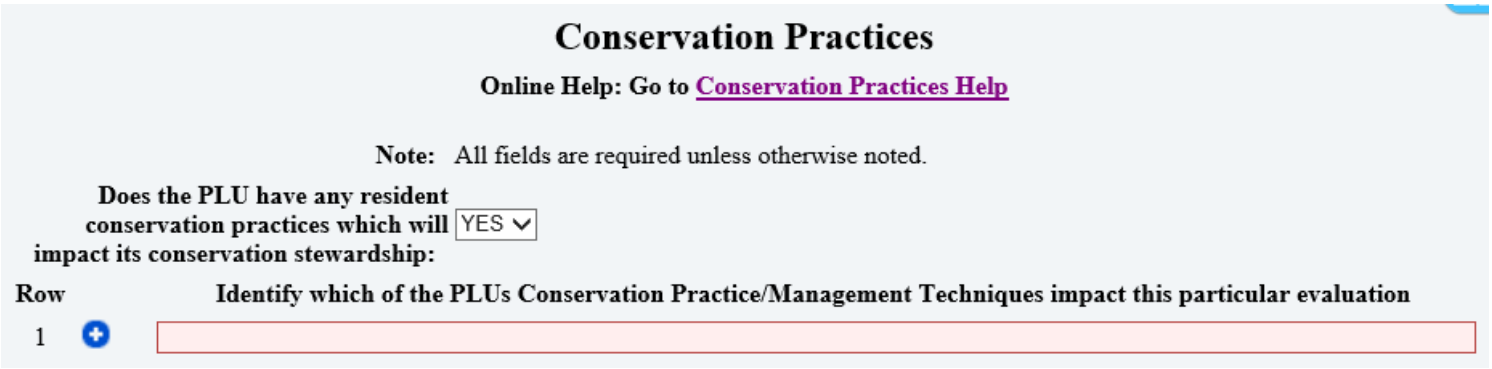
Conservation Practices represent the initial NRCS Conservation Practices as identified in the Field Office Technical Guide (FOTG).

Management Techniques represent conservation activities which may be sub-components of Conservation Practices that help to define the management activity and associated benefits.

Conservation Practices Walk-Through

1. Click the **Conservation Practices** tab or on the **Roadmap** .

2. Answer Yes to **Does the PLU have any resident conservation practices which will impact its conservation stewardship** (if applicable).



3. Enter the conservation practice name or practice number. This example uses **Fence (382)** as the first conservation practice applied. **382** can also be entered for the conservation practice number.

4. To enter another practice, click the **Add Row** button.

To add, delete or to reorder the rows use the appropriate button. The order of conservation practices has no effect on the results.

- Add Row
- Delete Row
- Move Row Up
- Move Row Down

5. Repeat steps 3 and 4 for each conservation practice you wish to enter. This example uses **Stream Crossing (578)** and **Watering Facility (614)**.

6. After all practices have been entered, click the **I Have Finished Entering Conservation Practices** radio button and **Save**.

Management Points are returned for the following:

- CPMT – Land Health
- CPMT – Sediment in Surface Water
- CPMT – Sediment in Surface Water
- CPMT – Surface Phosphorus Loss
- CPMT – Subsurface Phosphorus Loss
- CPMT – Surface Nitrogen Loss
- CPMT – Subsurface Nitrogen Loss
- CPMT – Pesticide Management (Leaching)
- CPMT – Pesticide Management (Solution Runoff)
- CPMT – Pesticide Management (Adsorbed Runoff)
- CPMT – Pesticide Management (Drift)

Irrigation Overview

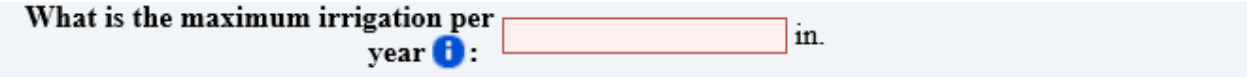
The Irrigation Management tab calculates irrigation stewardship by allowing the user to answer a portion of the Farm Irrigation Rating Index (FIRI) questions on the data entry page and then uses a web service to get an immediate Irrigation System Efficiency rating. FIRI is an NRCS resource used by planners to evaluate irrigation systems and management. The Resource Stewardship platform uses a modified version of FIRI which focuses on management decisions. This modified version is intended to allow greater efficiency in the data entry and farm evaluation processes.

FIRI in Resource Stewardship performs a quick analysis to determine whether irrigation operations meet irrigation threshold criteria. It is also used to compare an existing system to a proposed system to estimate water conserved. The Resource Stewardship platform uses FIRI for crop and pasture land uses. It is not applicable for land uses that do not use irrigation.

Resource Stewardship also allows manual entry of direct results from FIRI at the user's discretion. Users may enter FIRI results in the Stand Alone Irrigation section of the tool.

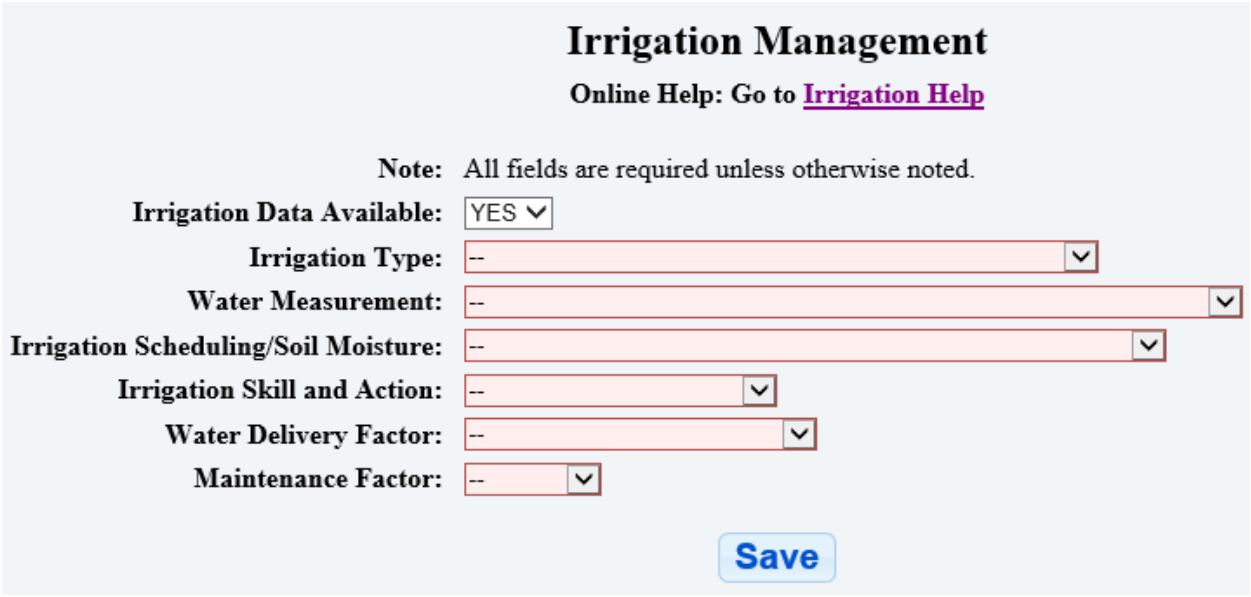
Irrigation Walk-Through

1. On the **Inventory** tab, enter the maximum irrigation per year and click **Save**. Irrigation data entry is only supported when an inventory survey has a maximum irrigation per year >0.



2. Click on the **Irrigation Management** tab or select Irrigation Management on the **Roadmap** .

3. If irrigation data is not available, select **No** and skip the remaining questions. If irrigation data is available, select **Yes**. Additional questions will generate based on the irrigation type selected.



Irrigation Data Available: Yes/No. If Yes, answer the following question.

Irrigation Type: Select answer from drop-down. Irrigation type answer choice will influence the following questions to answer for this section. Not every question will be asked for each irrigation type. Please see the irrigation question guide in the appendix for more information.

Land Leveling: Select answer from drop-down

Water Distribution Control: Select answer from drop-down

Conveyance: Select answer from drop-down

Tailwater Recovery: Select answer from drop-down

Water Measurement: Select answer from drop-down

Irrigation Skill and Action: Select answer from drop-down

Irrigation Scheduling/Soil Moisture: Select answer from drop-down

Water Delivery Factor: Select answer from drop-down

Maintenance Factor: Select answer from drop-down

Emitter Clogging: Select answer from drop-down

Trickle Design: Select answer from drop-down

Climatic: Select answer from drop-down

Wind: Select answer from drop-down

Sprinkler Design: Select answer from drop-down

See the Irrigation Management help page (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/?cid=nrcseprd1334052) for an appendix listing all of the Irrigation Management answer choices.

4. Click **Save**

Management Points are returned for the following:

Irrigation Management

Aquatic Habitat Overview

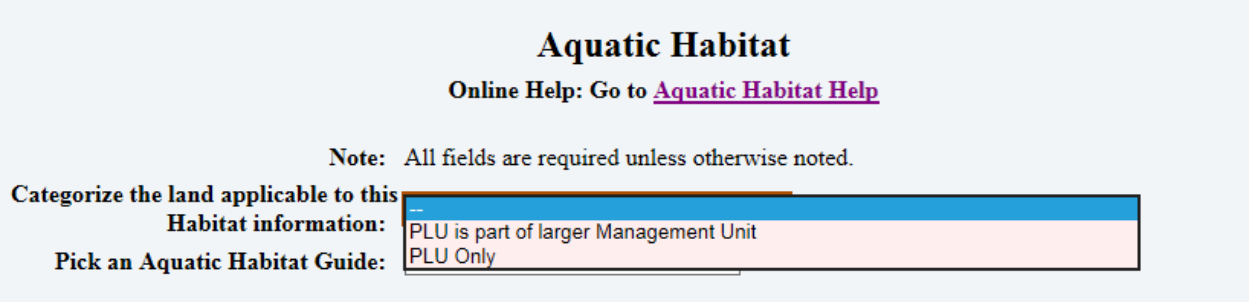
This section evaluates aquatic habitat by completing the appropriate aquatic Wildlife Habitat Evaluation Guide (WHEGs). WHEGs are models that depict important relationships between fish and wildlife and their habitats and provide an index of habitat suitability. They 1) simplify the real world, 2) improve understanding, and 3) predict outcomes.

Different WHEGs are available for selection in Resource Stewardship depending on the type of aquatic habitat you are evaluating.

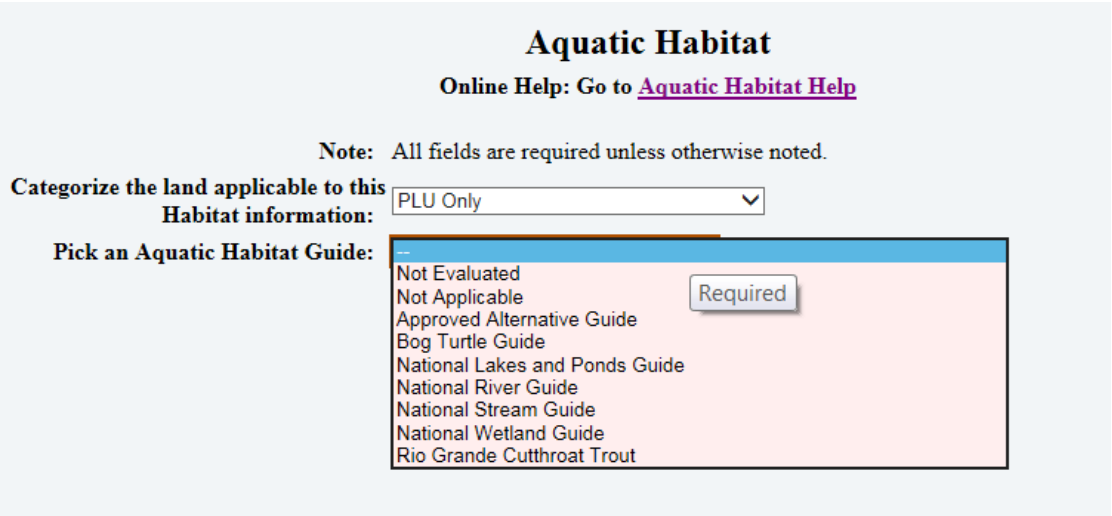
Aquatic Habitat Walk-Through

1. Click on the **Aquatic Habitat** tab or select Aquatic Habitat on the **Roadmap** .

2. Select the appropriate answer (PLU is part of larger Management Unit or PLU Only) for **Categorize the land applicable to this Habitat information**.



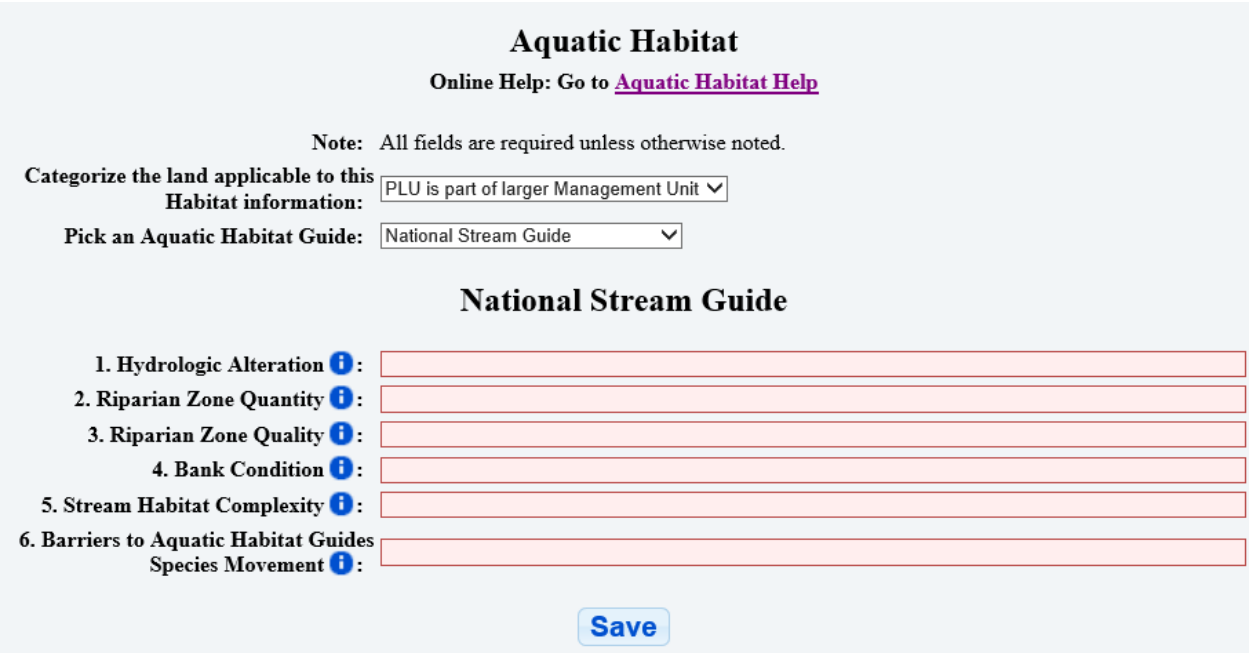
3. Select an aquatic habitat guide from the selection. If no guide is applicable, then select **Not Applicable.** Note that selecting Not Applicable means there is no such habitat on the PLU (i.e. no water on cropland). This will result in no score for aquatic habitat. Selecting **Not Evaluated** means that habitat concerns may exist, but questions were either unanswered or responses unknown. This will result in a failing score for aquatic habit.



Currently, you can select the following for **Pick an Aquatic Habitat Guide**:

- Not Evaluated
- Not Applicable
- Approved Alternative Guide
- Bog Turtle Guide
- National Lakes and Ponds Guide
- National River Guide
- National Stream Guide
- National Wetland Guide
- Rio Grande Cutthroat Trout

4. Select the appropriate answer choices from the drop down for each question for the habitat guide selected and click the **Save** button.



Note that if an **Approved Alternative Guide** is selected, utilize the guide outside Resource Stewardship and manually enter the information for **Name of Habitat Guide**, **Guide Threshold**, and **Guide Results**.

The Guide Threshold is 0.5 in most cases. The Guide Result (the client's score calculated based on the WHEG instructions) is typically a result between 0-1.

Management Points are returned for the following: Aquatic Habitats

Terrestrial Habitat Overview

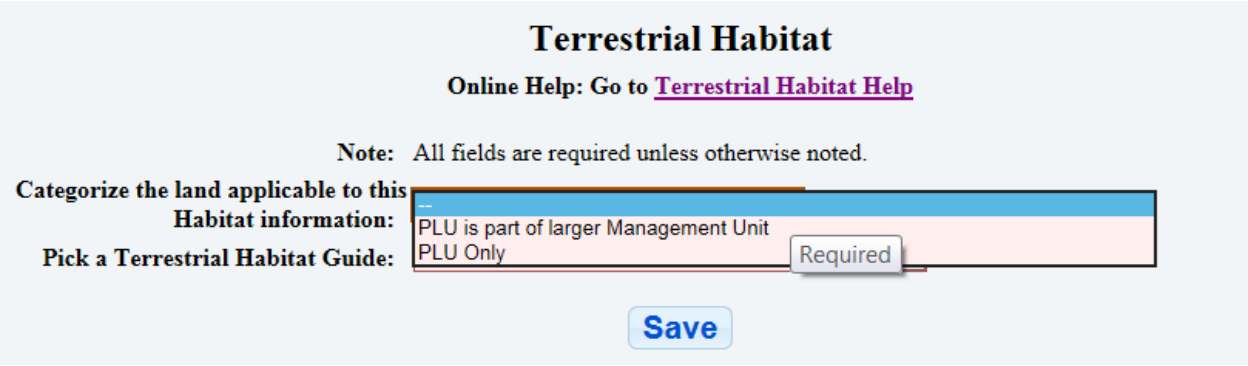
This section of the tool evaluates terrestrial habitat using the appropriate Wildlife Habitat Evaluation Guides (WHEGs). WHEGs are models that depict important relationships between fish and wildlife and their habitats and provide an index of habitat suitability. They 1) simplify the real world, 2) improve understanding, and 3) predict outcomes.

Different guides are available for selection depending on land use being evaluated. In addition, a limited number of Working Lands for Wildlife (WLFW) guides are also available.

Terrestrial Habitat Walk-Through

1. Click on the **Terrestrial Habitat** tab or select Terrestrial Habitat on the **Roadmap** .

2. Select the appropriate answer (PLU is part of larger Management Unit or PLU Only) for **Categorize the land applicable to this Habitat information**.



3. Select a terrestrial habitat guide from the choices available. If no guide is applicable, then select **Not Applicable.** Note that selecting Not Applicable means there is no such habitat on the PLU (i.e. no wildlife on farmstead). This will result in no score for terrestrial habitat. Farmstead and Associated Ag Evaluations have the option to select **Evaluated as part of adjacent land use**. This option will not penalize or improve the score. Selecting **Not Evaluated** means that habitat concerns may exist, but questions were either unanswered or responses unknown. This will result in a failing score for terrestrial habit.

   Available for all Evaluations:
   - Not Applicable
   - Not Evaluated
   - Approved Alternative Guide
   - Goldenwinged Warbler AppalachianMtn Guide

Greater Sage Grouse (ND and SD)
Greater Sage Grouse (WA)
Greater Sage Grouse (Idaho)
Lesser Prairie Chicken – Sand Sagebrush
Lesser Prairie Chicken – Sand Shinnery Oak
Monarch Butterfly Midwest Guide
Monarch Butterfly Southern Great Plains Guide
New England Cottontail
Southwestern Willow Flycatcher < 6000ft elev Guide
Southwestern Willow Flycatcher > 6000ft elev Guide

Available for Crop Evaluations:
National Cropland (Flooded) Guide
National Cropland (Unflooded) Guide
National Cropland with Hay (Unflooded) Guide
National Hayland Guide

Available for Range Evaluations:
National Range Guide

Available for Pasture Evaluations:
National Pasture Guide

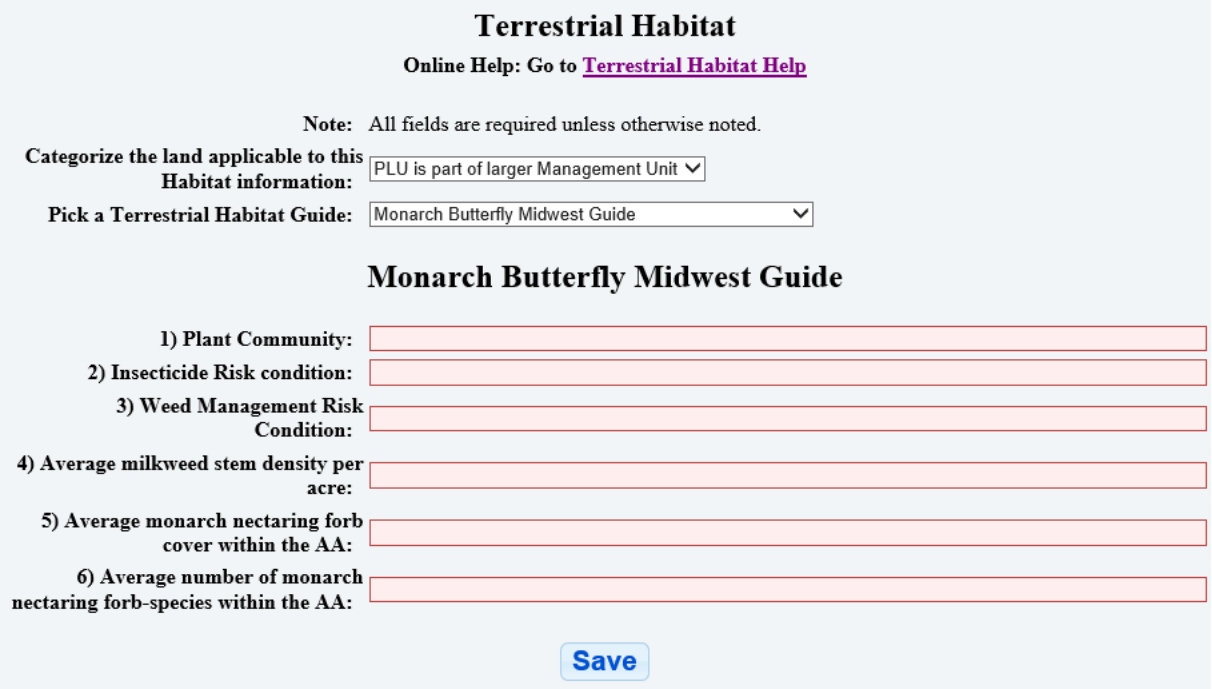
Available for Forest Evaluations
Forest Guide

Available for Farmstead and Associated Ag Evaluations

Evaluated as part of Adjacent Land Use

4. Select the appropriate answer choices from the drop down for each question for the terrestrial habitat guide selected and click the **Save** button.

Example



Note that if an **Approved Alternative Guide** is selected, utilize the guide outside Resource Stewardship and manually enter the information for **Name of Habitat Guide**, **Guide Threshold**, and **Guide Results.**

The Guide Threshold is 0.5 in most cases. The Guide Result (the client's score calculated based on the WHEG instructions) is typically a result between 0-1.

Management Points are returned for the following: Terrestrial Habitats

Additional WHEG Information

Common terms included in WHEGs are described below.

Non-Cropland Habitat Elements (NCHE): This includes habitat elements associated with crop fields occurring within the field, such as field borders, odd areas, windbreaks, wetlands, brushy draws, include field borders, odd areas, windbreaks, wetlands, brushy draws, hedgerows, seeps, riparian areas, vegetated ditches, native vegetated communities, rare and declining habitats, and center pivot corners hedgerows, seeps, riparian areas, vegetated ditches, native vegetated communities, rare and declining habitats, and center pivot corners. It also includes habitat elements immediately adjacent to the crop fields, such as CRP (Conservation Reserve Program), woodlands, and riparian areas. The evaluated NCHE must be under the control of the applicant and be ≥ 30 feet wide and ≥ 0.1 acre. NCHE must meet state quality standards for wildlife habitat as defined by the NRCS State Biologist with guidance from the State Wildlife Agency.

Pasture and Non-Pasture Habitat Elements (NPHE): This includes non-pastureland cover, such as field borders, odd areas, windbreaks, wetlands, brushy draws, hedgerows, seeps, riparian areas, and center pivot corners that occur within the field, or NPHE that occurs immediately adjacent to the pasture, such as CRP, woodlands, and riparian areas. The evaluated NPHE must be under the control of the applicant and be ≥ 30 feet wide and ≥ 0.1 acre. NPHE includes paddocks not grazed during the nesting season. NPHE must meet state quality standards for wildlife habitat as defined by the NRCS State Biologist with guidance from the State Wildlife Agency.

Range: This refers to rangeland habitats on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs, or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland.

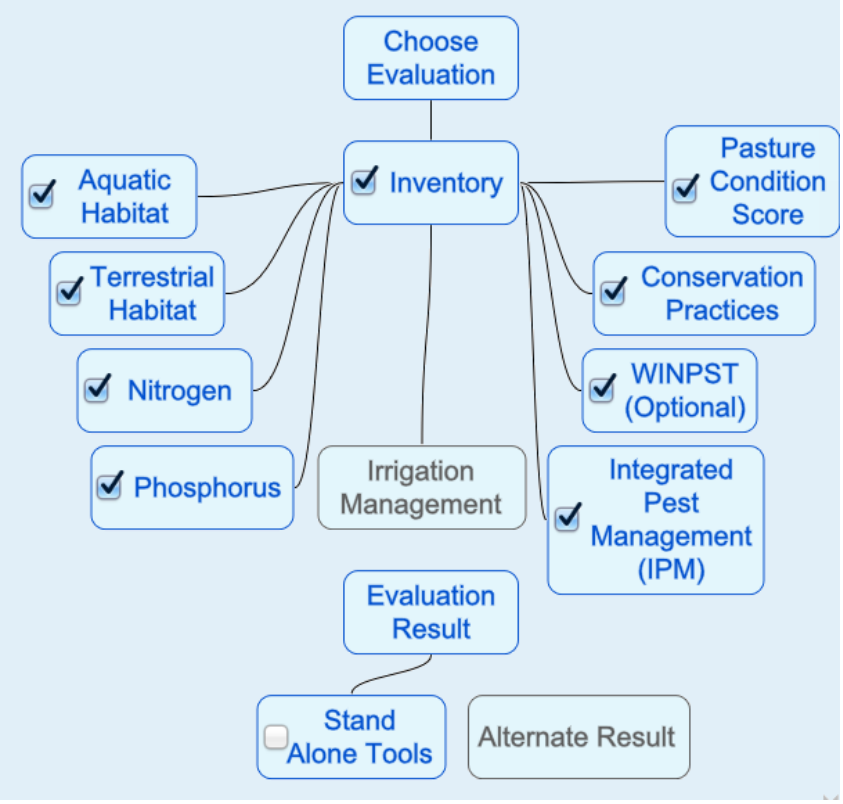
Pasture Evaluation Results Overview

Evaluation results identify the condition at the site. Resource Stewardship can also evaluate alternative management scenarios or planned conservation activities to improve resource stewardship. Within RS, most major resource concerns are made up of sub-concerns. The user has the option to evaluate each of those sub-concerns individually and determine their management level compared to the stewardship threshold.

Pasture Evaluation Results Walk-Through

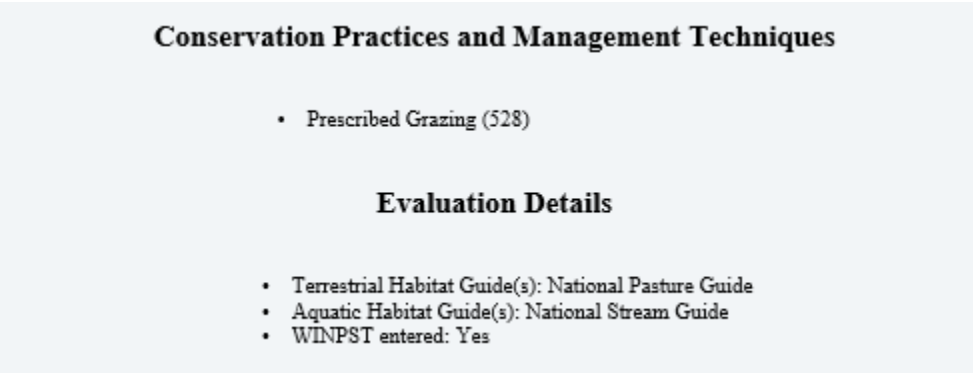
1. Click on the **Roadmap** and select **Evaluation Result**.

   Note: If **Evaluation Result** is not active, go through all the tabs to ensure that all information is entered and saved.



Note: See the Stand Alone Tools help webpage (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/?cid=nrcseprd1335250) for help on how to complete the **Stand Alone Tools** section (if needed).

Below is an example Evaluation Report.



The Evaluation Report can be printed by clicking the **Print** button at the bottom of the page.

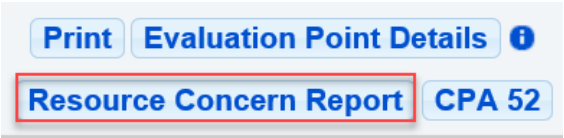
Evaluation Point Details

1. To view the evaluation point details, click **Evaluation Point Details** at the bottom of the Evaluation Result report. This page provides the numerical scores and thresholds for the Management Points in the evaluation.

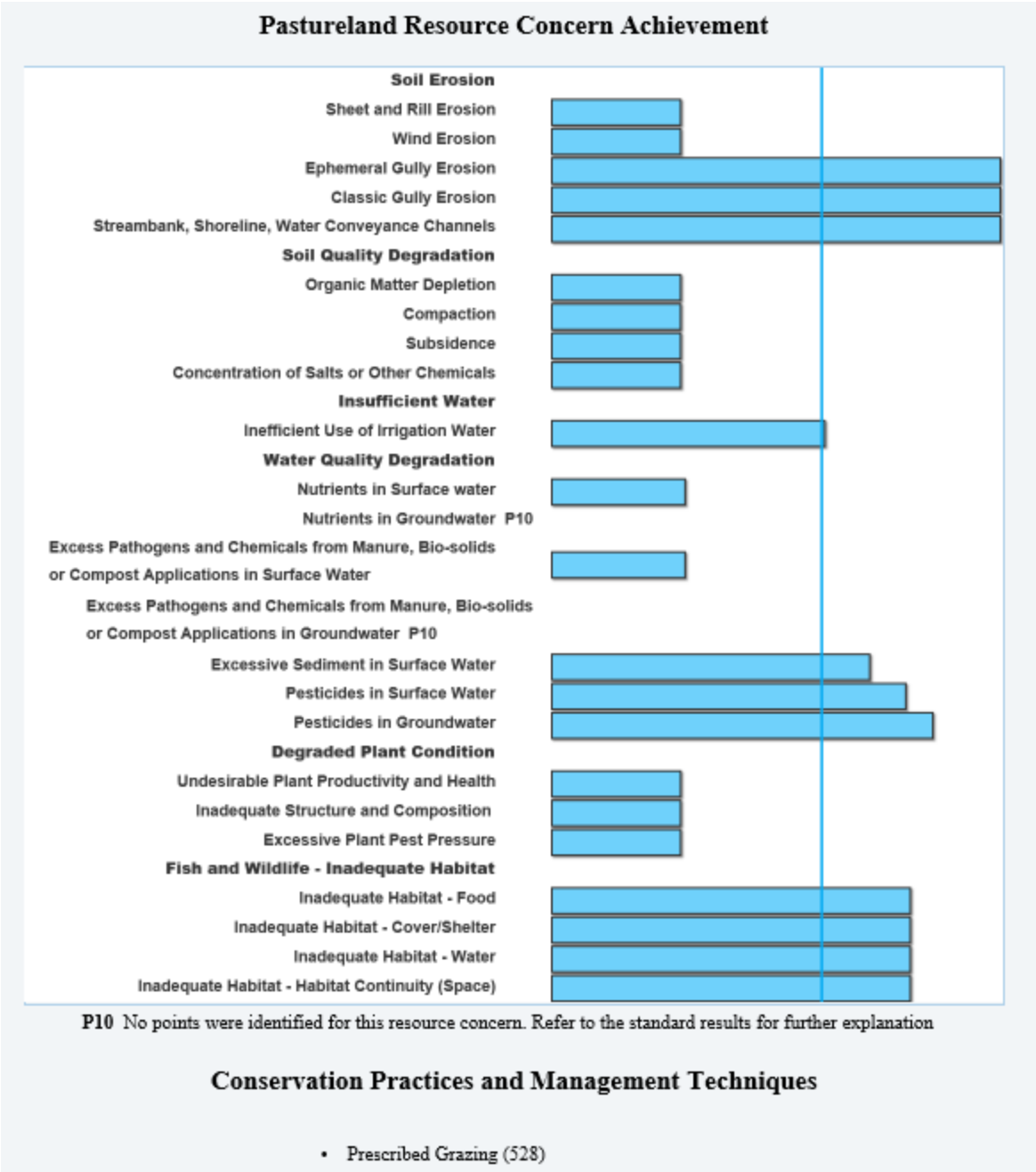
Resource Concern Report

Resource Stewardship evaluation results (Standard or Alternate) provide a report that maps the RS result areas to the NRCS Resource Concerns. (Note: RS does not currently provide mappings to all possible Resource Concerns.)

1. Click **Resource Concern Report** at the bottom of the Evaluation Results page.



The Resource Concerns represented vary by land use evaluation type. Resource Concerns are mapped by point detail to the RS final Evaluation Results.



P10 No points were identified for this resource concern. Refer to the standard results for further explanation

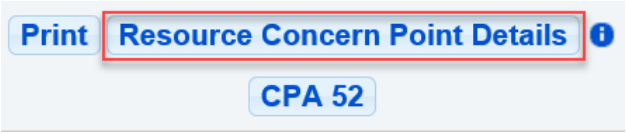
Conservation Practices and Management Techniques

- Prescribed Grazing (528)

Unlike the final Evaluation Report, there are no summary bars rolling up the Resource Concern sets.

The bottom of the Resource Concern Report has a button to view the Resource Concern Point Details.

2. Click **Resource Concern Point Details**.



Multiple RS result areas may compete for the representation of a single Resource Concern and multiple Resource Concerns may be mapped from multiple Resource Stewardship result areas (example below).

Resource Concern Point Details

Resource Concern Point Details

Resource Concern	Pasture Test Resource Concern Score	Resource Stewardship Key Indicator	Pasture Test Key Indicator Points
Soil Erosion	--	--	--
Sheet and Rill Erosion	29	Land Health	29
Wind Erosion	29	Land Health	29
Soil Quality Degradation	--	--	--
Organic Matter Depletion	29	Land Health	29
Compaction	29	Land Health	29
Subsidence	29	Land Health	29
Concentration of Salts or Other Chemicals	29	Land Health	29
Insufficient Water	--	--	--
Inefficient Use of Irrigation Water	61	Irrigation Management	61
Water Quality Degradation	--	--	--
Nutrients in Surface water	30	Surface Phosphorus Loss	30
Nutrients in Surface water	30	Surface Nitrogen Loss	32
Nutrients in Groundwater	0	Subsurface Nitrogen Loss	43
Nutrients in Groundwater	0	Subsurface Phosphorus Loss	0
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water	30	Surface Phosphorus Loss	30
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water	30	Surface Nitrogen Loss	32
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Groundwater	0	Subsurface Nitrogen Loss	43
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Groundwater	0	Subsurface Phosphorus Loss	0
Excessive Sediment in Surface Water	71	Sediment in Surface Water	71
Pesticides in Surface Water	79	Pesticide Management (Solution Runoff)	79
Pesticides in Surface Water	79	Pesticide Management (Adsorbed Runoff)	79
Pesticides in Groundwater	85	Pesticide Management (Leaching)	85
Degraded Plant Condition	--	--	--
Undesirable Plant Productivity and Health	29	Land Health	29
Inadequate Structure and Composition	29	Land Health	29
Excessive Plant Pest Pressure	29	Land Health	29
Fish and Wildlife - Inadequate Habitat	--	--	--
Inadequate Habitat - Food	80	Terrestrial Habitats	80
Inadequate Habitat - Food	80	Aquatic Habitats	74
Inadequate Habitat - Cover/Shelter	80	Terrestrial Habitats	80
Inadequate Habitat - Cover/Shelter	80	Aquatic Habitats	74
Inadequate Habitat - Water	80	Terrestrial Habitats	80
Inadequate Habitat - Water	80	Aquatic Habitats	74
Inadequate Habitat - Habitat Continuity (Space)	80	Terrestrial Habitats	80
Inadequate Habitat - Habitat Continuity (Space)	80	Aquatic Habitats	74

CPA-52

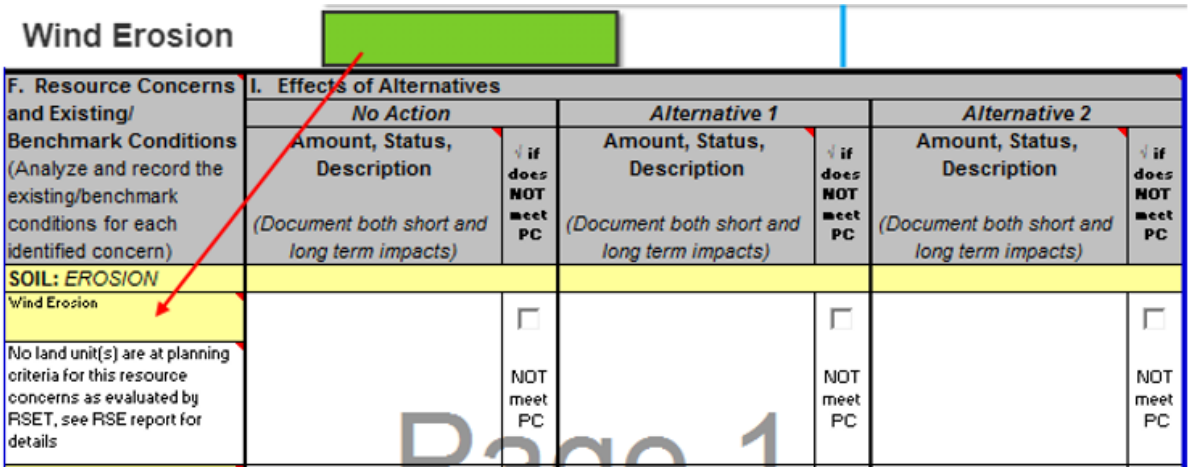
The CPA-52 is the environmental evaluation document utilized by NRCS to ensure compliance with the National Environmental Policy Act (NEPA). The user is responsible for choosing the RS land unit evaluations which properly associate to applications/agreements, and the subsequent upload of the CPA-52 into DMS. Not all Resource Concerns are mapped and included in the RS-generated CPA-52. Therefore, the user is expected to complete the document started by RS.

1. Click **CPA 52** at the bottom of the Evaluation Results page.

Resource Stewardship will generate a starter CPA-52 based on a template spreadsheet. Answers for each resource concern are based on whether the result area in RS achieved the threshold.

Benchmark Evaluation

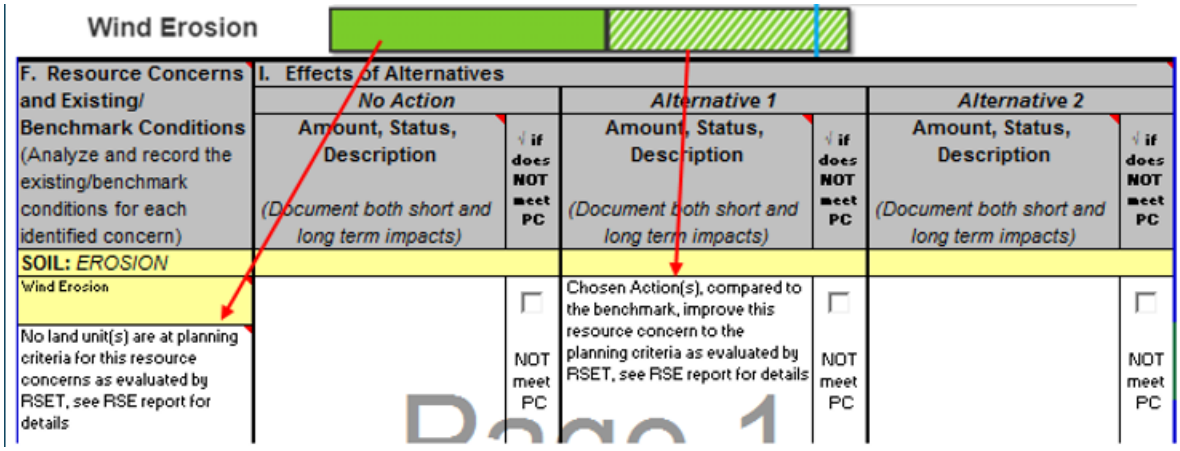
Example of a result area from a Benchmark Evaluation that did not achieve the threshold, and the corresponding answer to be populated on the CPA-52.



Benchmark Evaluation Compared to a Planned/Alternative Scenario Evaluation

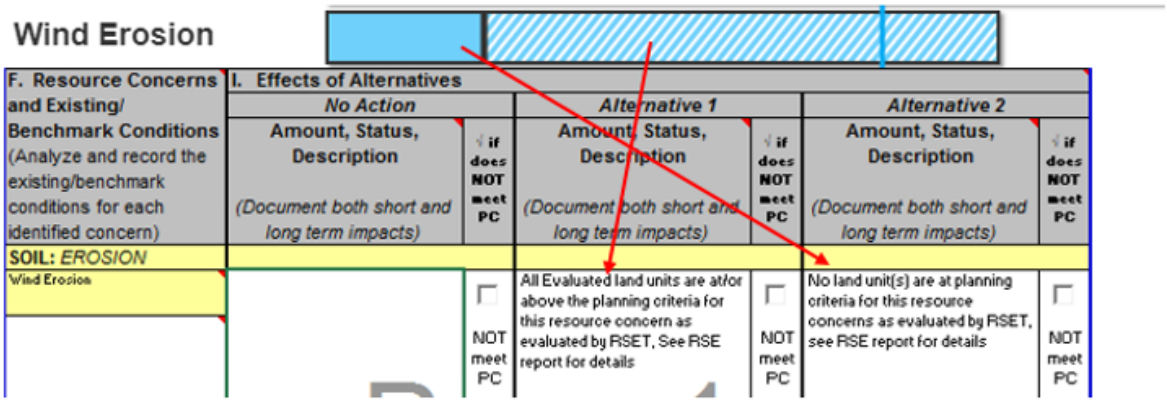
Example of a result area in RS from a Benchmark Evaluation that did not achieve the threshold, compared to

a Planned/Alternative Scenario Evaluation where chosen actions improved the result area to exceed the threshold.



Planned Evaluation/Alternative Scenario Compared to Planned Evaluation

Example of a comparison between two Planned/Alternative Scenario Evaluations where one evaluation achieved the threshold and the other did not, and the corresponding answers to be populated on the CPA-52.



Comparing Two Evaluations

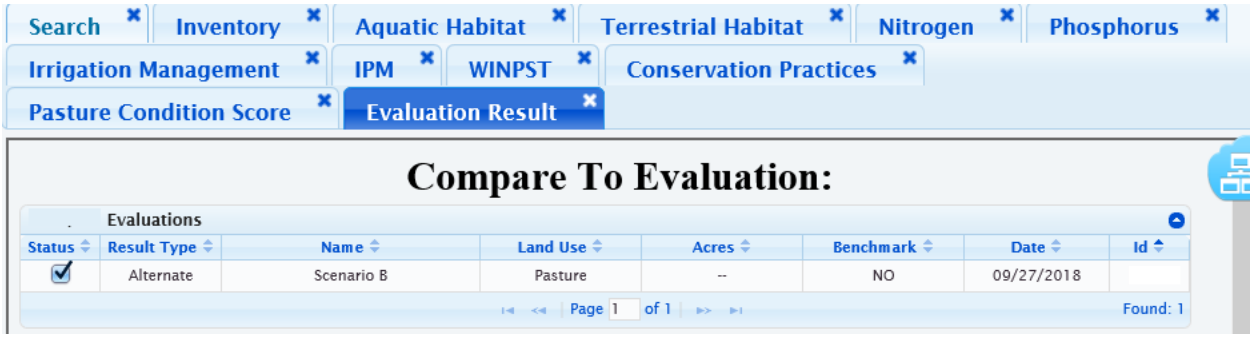
Comparing evaluations on the same PLU is useful to see how changes to the management system can improve or hinder stewardship. By comparing evaluations and identifying areas for improvement, land managers can better improve their resource stewardship and conservation. The evaluation results section allows the user to directly compare two different evaluations on the same report.

To compare evaluations on the same PLU, you must have two complete evaluations on the same land unit. To do this you can copy an evaluation, and then edit the copied version to create an alternative scenario. (See here for assistance creating a new evaluation and here for assistance copying an evaluation.) Any number of alternative evaluations or alternative scenarios may be attached to a PLU. Comparisons may be made against the benchmark evaluation or other alternative evaluations.

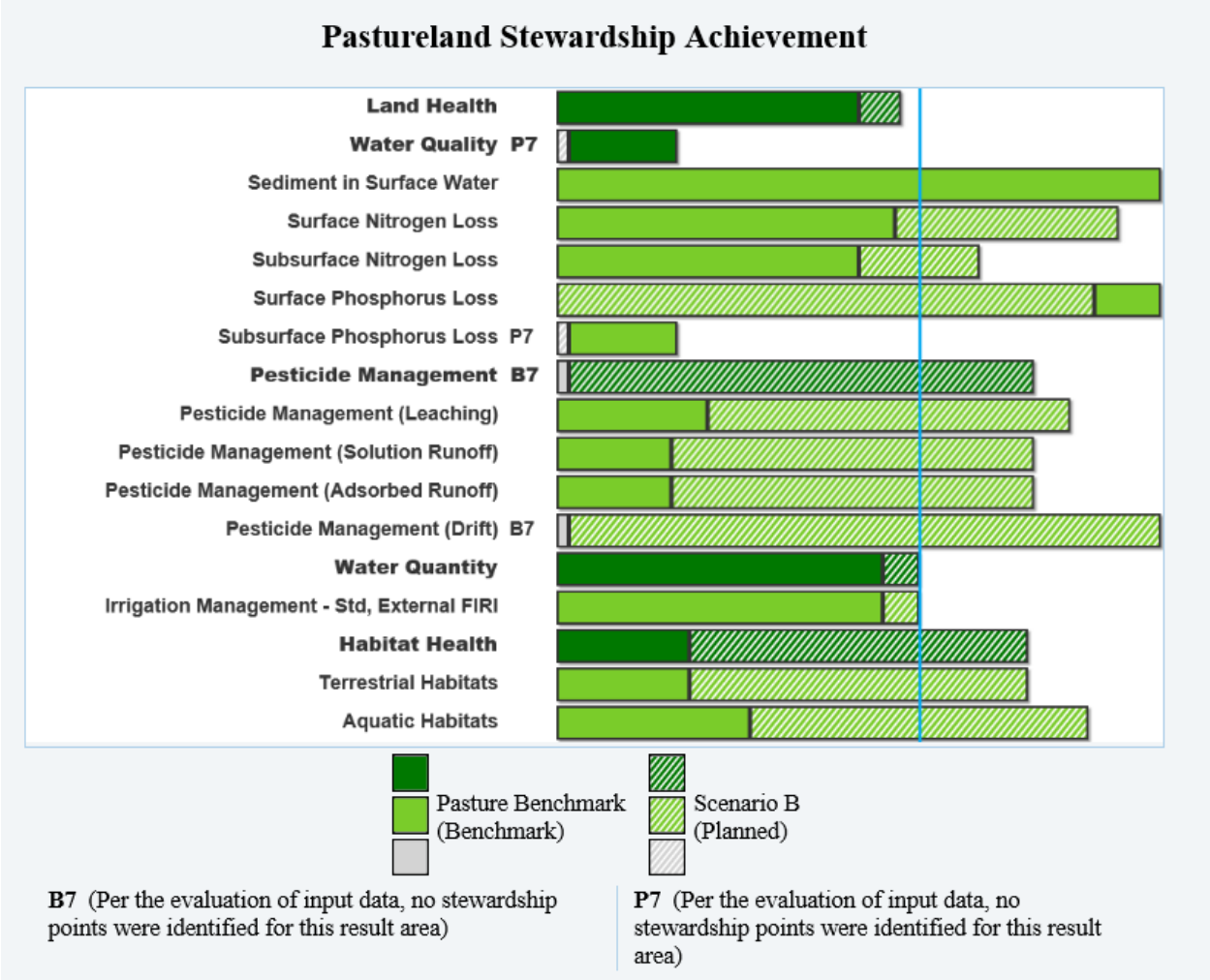
Comparing Two Evaluations on the Same Evaluation PLU

1. Click **Evaluation Result** in the Roadmap or select the **Evaluation Result** tab.

2. Evaluations available to compare to the current evaluation will be displayed in the Evaluations bar at the top of the Evaluation Results page. Select the evaluation you would like to compare by clicking on it.



The current evaluation will be compared to the selected alternative scenario evaluation. The alternative scenario evaluation will show up on the bar chart as shaded.



Interpreting the Evaluation Results

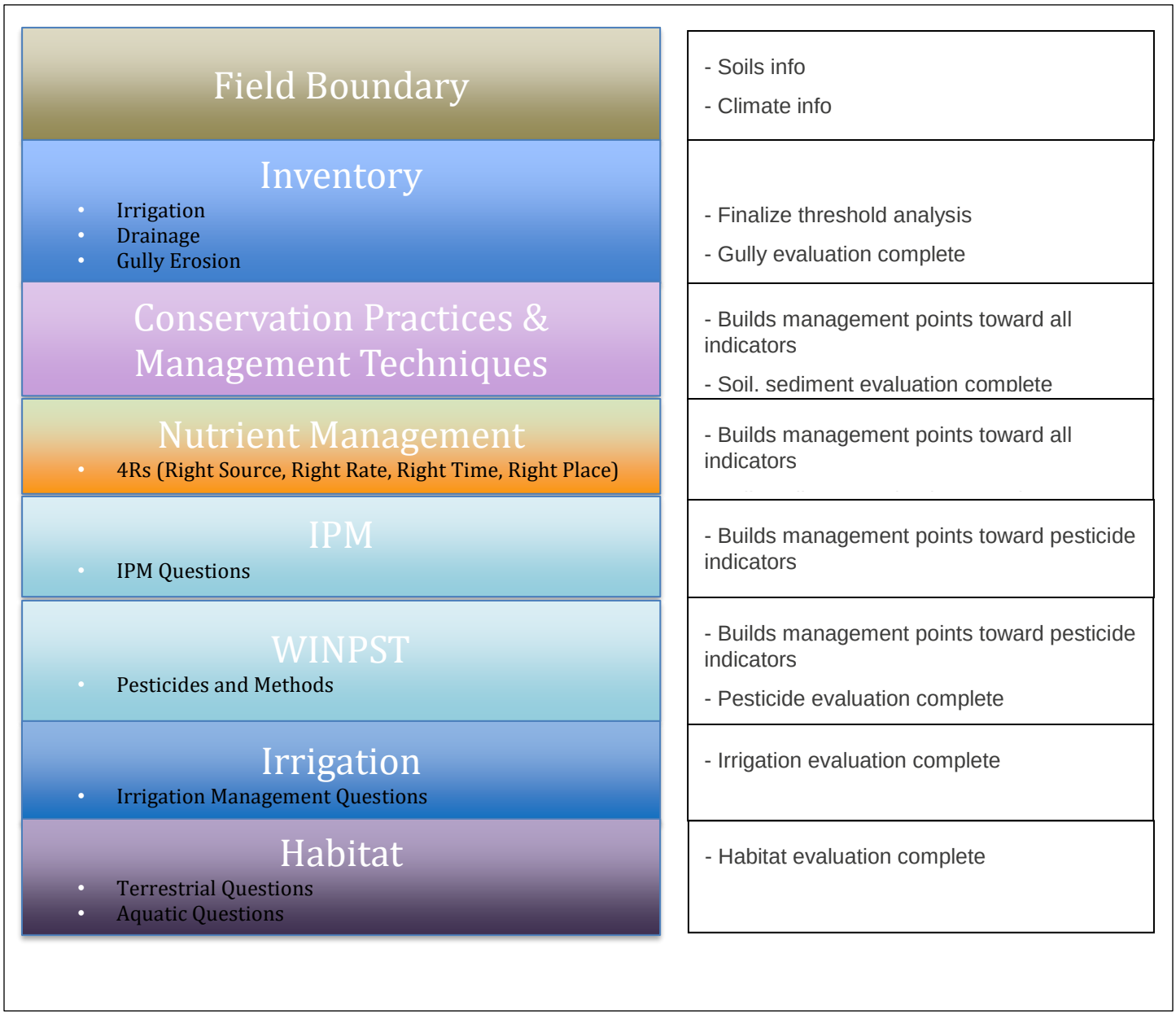
As shown in the graphic above, the solid bars represent the current/benchmark state. Each of the key indicators are rolled up into five main categories (Soil Management, Water Quality, Pesticide Management, Water Quantity, Air Quality, and Habitat Health), represented by the darker solid bars. When the current/benchmark state is compared to an alternative/planned scenario, the alternative/planned scenario is represented by the shaded bars. The vertical blue line represents the threshold value for each of the different key indicators. To pass stewardship, each result area must meet or be to the right of the blue bar.

Appendix A: Acronyms

CDSI	Conservation Delivery Streamlining Initiative
CEAP	Conservation Effects and Assessment Program
CLU	Common Land Unit
CPMT	Conservation Practices and Management Technique
CST	Customer Service Toolkit
ESD	Ecological Site Description
FIRI	Farm Irrigation Rating Index
FOTG	Field Office Technical Guide
FSA	Farm Service Agency
HUC	Hydrologic Unit Code
IET	Integrated Erosion Tool
LGU	Land Grant University
NM	Nutrient Management
NRCS	Natural Resources Conservation Service
RS	Resource Stewardship
RSE	Resource Stewardship Evaluation
RSET	Resource Stewardship Evaluation Tool
PLU	Planned Land Unit
PSMT	Pre-sidedress Nitrogen Test
RUSLE2	Revised Universal Soil Loss Equation
SSURGO	Soil Survey Geographic database
STEP	Stewardship Tool for Environmental Performance
T	Soil Loss Tolerance Level
T&E	Threatened and Endangered (species)
WEPS	Wind Erosion Prediction System
WHEG	Wildlife Habitat Evaluation Guide
WINPST	Windows Pesticide Screening Tool
WLFW	Working Lands for Wildlife
WQM	Water Quality Management Services

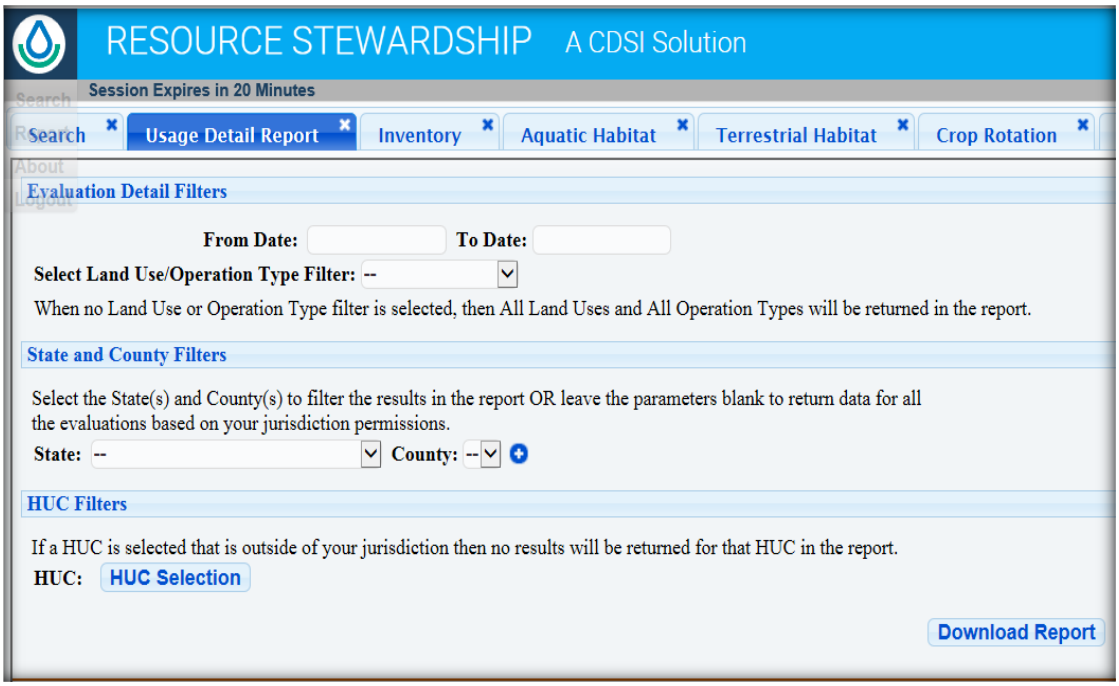
Appendix B: Resource Stewardship Inventory Flow

The Resource Stewardship Inventory Flow provides an overview of what information is captured in the inventory from beginning to end. The field boundary, inventory, integrated pest management (IPM), nutrient management, terrestrial habitat, and irrigation information is most critical to capture. You can select "No" or "Not Applicable" for conservation practices and aquatic habitat. However, completing those sections (if applicable) offers a more robust and thorough evaluation.



Appendix C: Usage Detail Report and Hydrologic Unit Codes

Usage reports are available in RS. Access to reporting is controlled by NRCS zRoles (an RS reporting role in zRoles is required). Users with access can constrain reports by date, land use, operation type, subsets of their jurisdiction, and hydrologic unit codes (HUCs).



A hydrological code or hydrologic unit code is a sequence of numbers or letters that identify a hydrological feature like a river, river reach, lake, or area like a drainage basin (also called watershed or catchment). HUCs are available as a geospatial layer in NRT.

Boundary map of an HUC feature

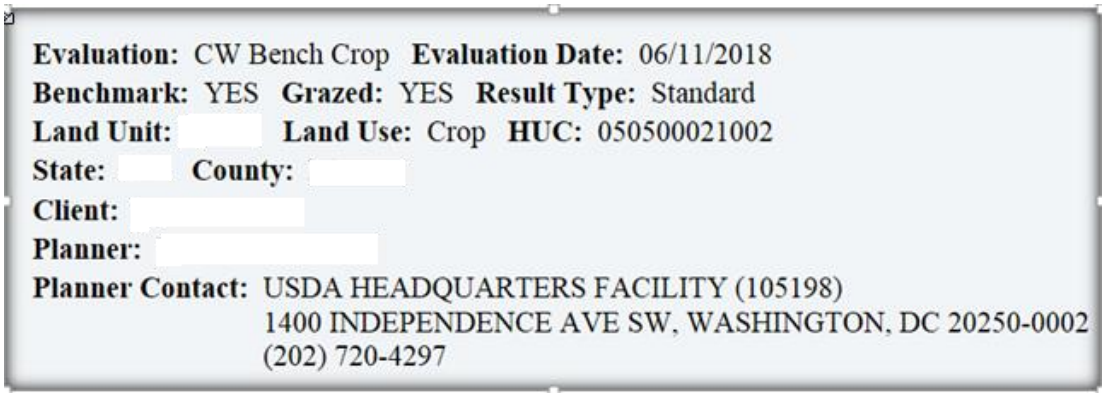
Any of the 6 HUC levels may be specified in RS (region, subregion, basin, subbasin, watershed, and subwatershed). The table below shows examples of these 6 different levels and their HUCs.

Name	Level	Digits	Average size (square miles)	Number of HUs (approximate)	Example name	Example code (HUC)
Region	1	2	177,560	21	Pacific Northwest	17
Subregion	2	4	16,800	222	Lower Snake	1706
Basin	3	6	10,596	370	Lower Snake	170601
Subbasin	4	8	700	2,200	Imnaha River	17060102
Watershed	5	10	227 (40,000–250,000 acres)	22,000	Upper Imnaha River	1706010201
Subwatershed	6	12	40 (10,000–40,000 acres)	160,000	South Fork Imnaha River	170601020101

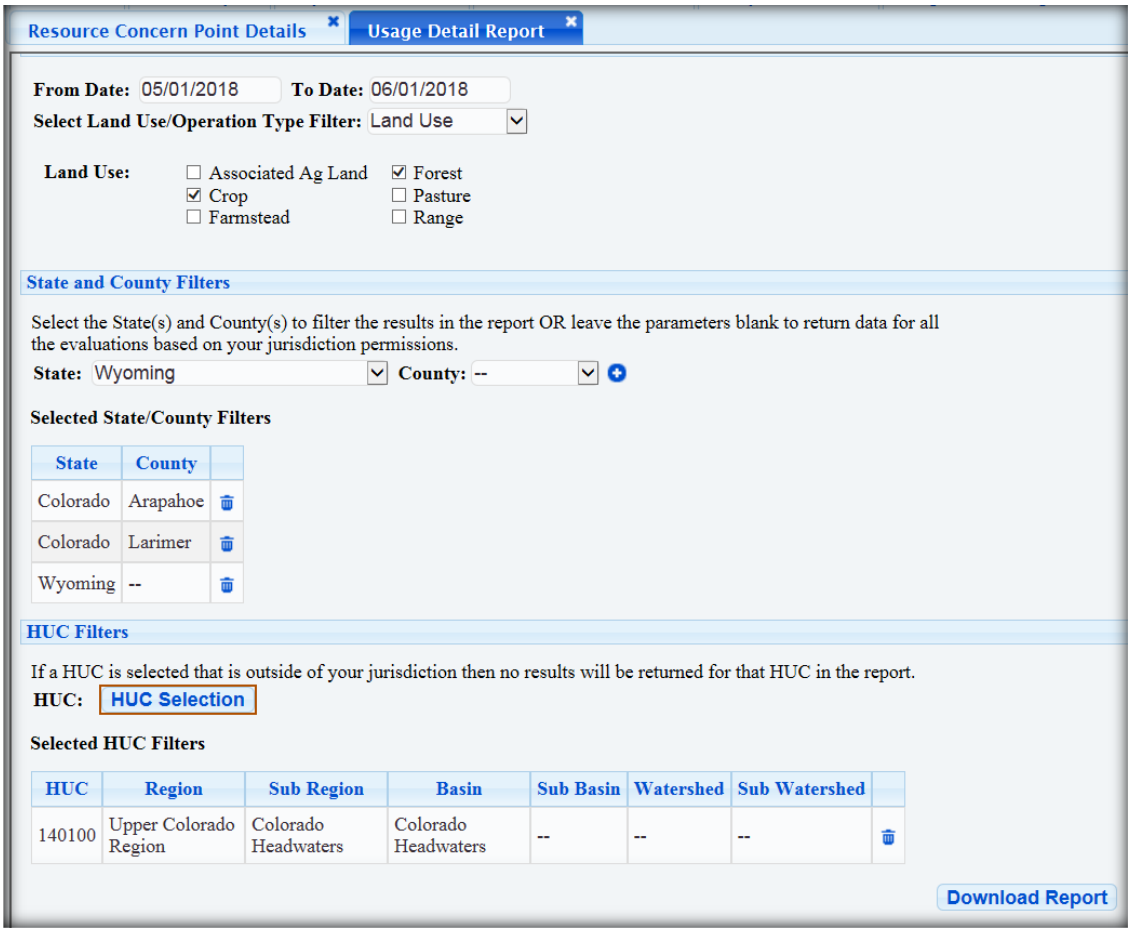
HUC data is visible to RS users in the following locations: the PLU inventory page, evaluation report headers, and the HUC column on the usage detail report.

PLU Inventory

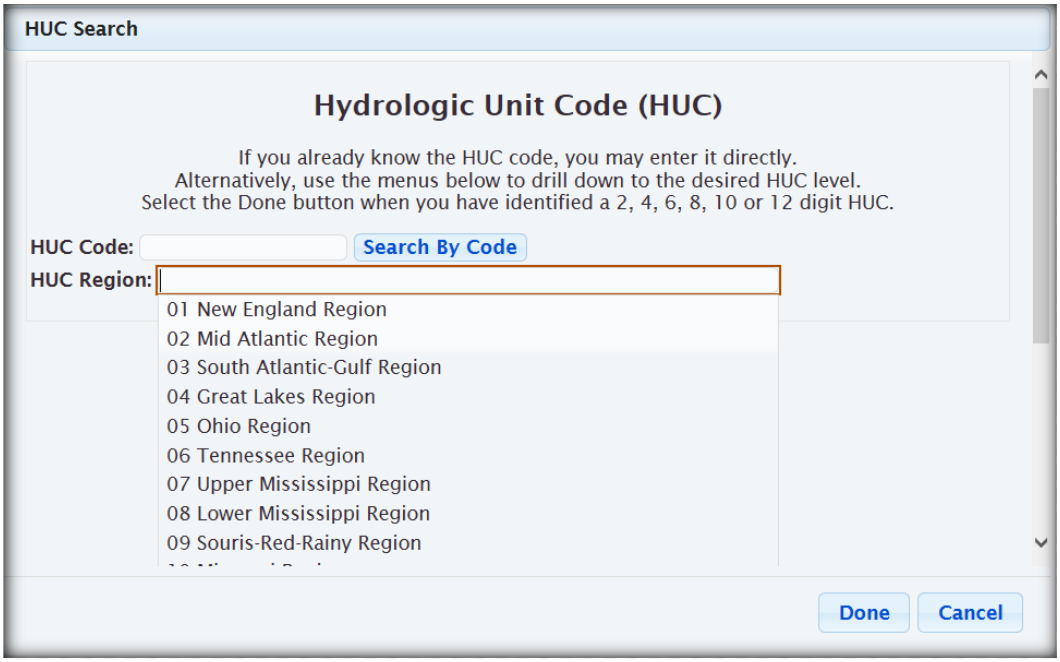
Evaluation Report Headers

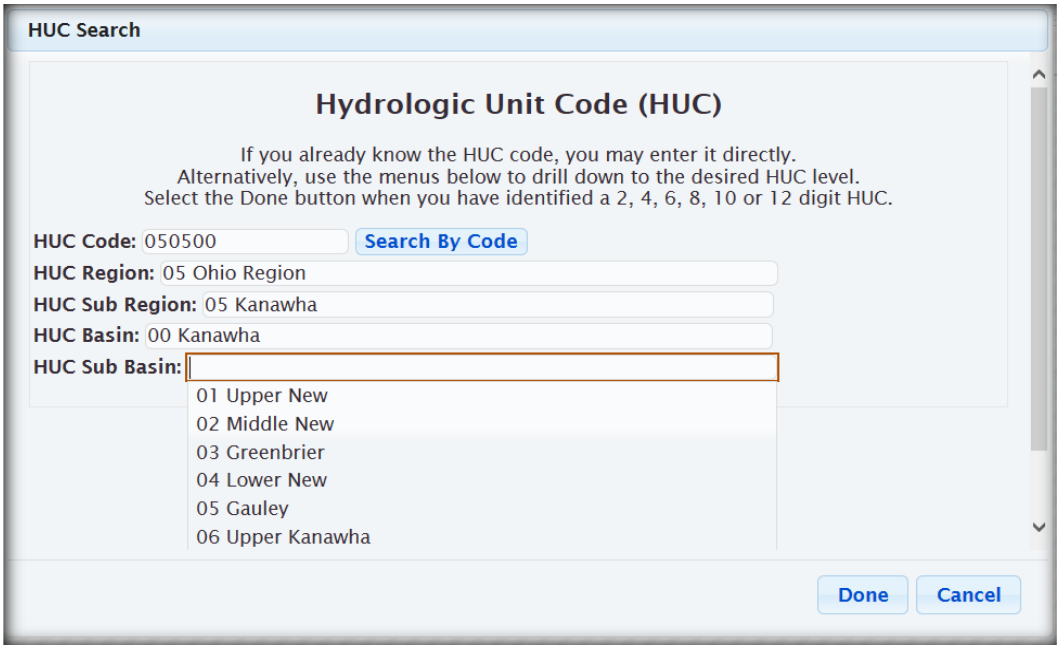


HUC Column on the Usage Detail report



Users can search for HUCs or enter them directly into the Usage Detail Report.





USDA is an equal opportunity
provider, employer, and lender.